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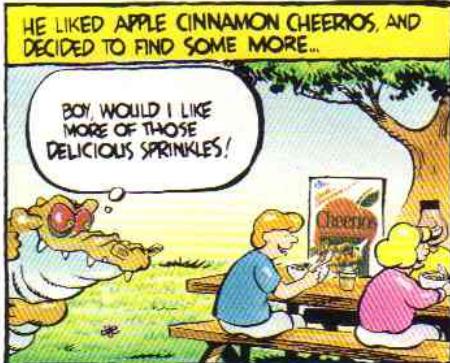
SCIENCE  
MAKES  
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# THE ADVENTURES OF apple & CINNAMAN

**DEFENDERS OF THE SPRINKLES**

#3



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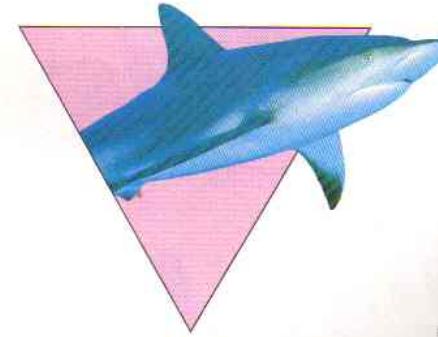


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## ON OUR COVER

Olympic super swimmer Janet Evans  
streamlines her body to cut through  
the water. Photo © Ken Levine/Allsport

## **The Bus Stops Here**

When it comes to seat belts, there's no stopping Aaron Gordon of Miami, FL. The 10-year-old says school buses without them just don't pass the test.

Aaron got the idea to put seat belts in buses after he was taken for a bad ride. "Our bus stopped short," he recalls, "and everybody got jolted out of their seats. I thought, 'Seat belts could stop this.'"

So Aaron got 4,000 people to sign a petition. He then went to the local school board to argue for shoulder-and-lap belts. The school board said they would cost too much.

But that didn't stop Aaron. On a plane



## **News BLASTS**

trip, he noticed that flight attendants wore shoulder-hugging straps during take-offs and landings. Aaron thought they could be used on buses.

He then met with a local lawmaker and convinced him that it was time to buckle up. Based on Aaron's suggestion, a research company is now working on a new seat belt. If it works, Aaron's name will be on the patent for having the *ride* idea!



## **Read or Digest**

Have you "herd" the news? Cows may soon start recycling newspapers...by eating them!

Larry Berger, an animal nutrition expert at the University of Illinois, says he has come up with a way to feed newspapers to cattle. How does he make it easier for them to stomach? By boiling the paper! (But he only boils those with soybean oil-based ink. "Normal" ink isn't healthy for cows.)



Although newspaper doesn't have a lot of vitamins, it does have cellulose—which is also found in plants. Cows can digest its energy-rich molecules.

Berger thinks boiled newspaper could replace as much as 40 percent of a cow's diet! A cow, he says, could eat about 10 pounds of old newspapers every day.

And that's good news for the environment. The U.S. recycles about six million tons of newspaper each year. Still, there are more newspapers than the recycling plants can handle.

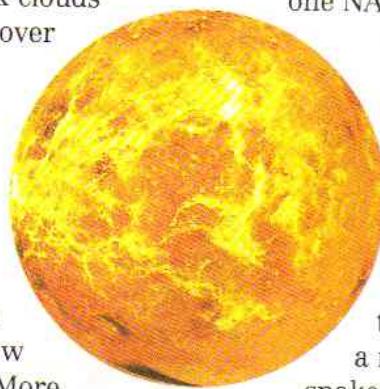
But there *are* plenty of cows ready to digest the news. "About 30 million cows live in the U.S.," says Berger. "If they were fed a diet of 20 percent newspapers, there'd be no 'leftovers'!"

## Map Time

On its 950th orbit around Venus, the spacecraft *Magellan* beamed radio signals through the thick clouds that constantly cover the planet. The signals bounced right back.

But suddenly, a bunch of radio waves didn't make the round trip. Did a black hole swallow them up? Nope. More likely, the waves were absorbed by a 6-mile-high active volcano. It's one of many that NASA scientists think exists on Venus.

Thanks to the *Magellan* flybys, NASA scientists have pieced together thousands of amazing images. They now



have the first detailed map of Venus. "We probably have a better global map of Venus than we have of Earth," says one NASA scientist.

The map is giving Earthlings a better picture of Venus. It shows pancake-shaped volcanoes gathered near the equator and a river of lava that snakes 4,200 miles across the planet.

But *Magellan* hasn't finished exploring this hot planet (its temperatures reach 900 degrees F.). By the time the mission ends in 1995, there will be four *trillion* new bits of information. Try reading *that* map!

PHOTO COURTESY NASA

## Poach Busters

It's time to stop illegal hunters—called poachers—who track down and kill thousands of wild animals each year. So who you gonna' call? Poach busters!

PHOTO © RANDALL HYMAN



You'll find them at a division of the U.S. Fish and Wildlife Service in Ashland, OR. The wildlife crime lab works on cases where the "most-wanted" are poachers and the victims are animals.

When law officials catch suspected poachers with their "animal loot," they send the evidence to the crime lab.

That's when the super sleuths go to work. They can, for example, now use a technique to link blood stains on a hunter's clothing to an individual animal. Or use an electron microscope to identify illegal elephant ivory.

The lab is making sure that crime doesn't pay. Many poachers have already been arrested. "There's a growing feeling among poachers," says one poach buster, "that the easy life is going to come to an end soon."

## Global Hues

Sometimes things aren't always black or white. At least that's what the folks at Crayola think. Since people come in all colors, they've come up with a pack of skin-tone colors.

Their new eight-crayon "global pack" includes peach, tan, apricot, sepia, burnt sienna and mahogany, plus black and white. And the box also has a colorful new logo: a blue globe. After all, we are the world, we are the...crayons!



PHOTO COURTESY BINNEY & SMITH



## So What's New?

You tell us and you'll get a nifty CONTACT T-shirt—if we print your story. Send us any science story from the news that you think our readers would like to know about. (Be sure to tell us your T-shirt size and where you heard the story.)

Send to:

TNT

3-2-1 CONTACT

Magazine

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## DOES ICE FLOAT IN A GLASS OF WATER?

Ice cubes float in a glass of water just as icebergs float in the ocean. Your ice cube is a lot smaller, and you won't find polar bears in your glass—but the reason they float is the same.

When most substances get cold, their molecules vibrate slower and move closer together, or "contract." But not water. Water molecules do slow down when the water temperature drops below 39 degrees Fahrenheit—but they move apart, not together.

When water freezes, its molecules arrange themselves in a neat, orderly pattern as they move apart. This pattern takes up more space than unfrozen water molecules. That's why water expands, or gets bigger, when it freezes—and why water pipes burst if they freeze in winter. The expanding water cracks them open.

The spread-out molecules of ice are not as dense as water molecules. So they float on top of the water. That's what keeps those cubes in your glass clinking instead of sinking!

*Question sent in by Jack Milner, Dayton, OH.*

ILLUSTRATIONS BY VALERIE MARSELLA



By Christina Wilsdon

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## ARE FIREWORKS MADE?

Very carefully! A firework packs a lot of explosive power. That's why only experts should build and set off fireworks.

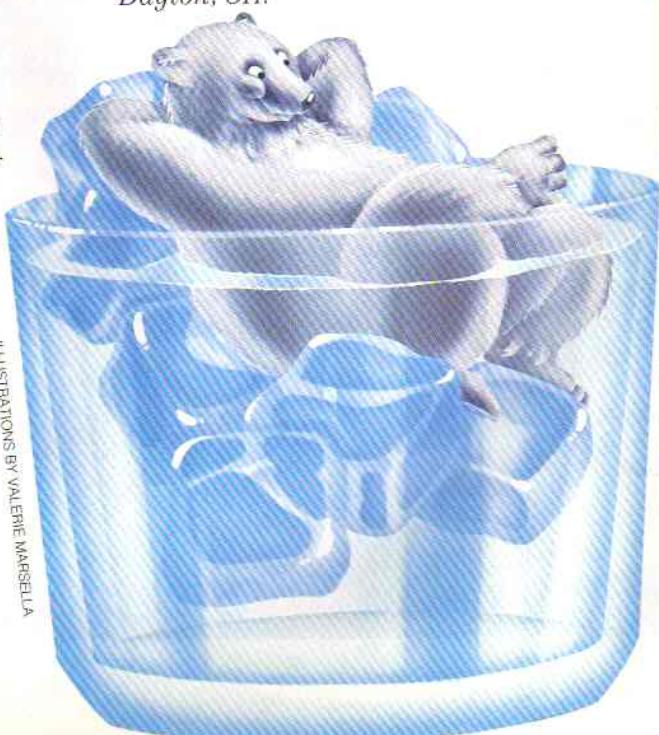
Fireworks start off as simple rockets. The rocket is made by packing two kinds of gunpowder into a paper tube. One kind burns after being lit by a fuse. As it burns, it releases hot gases. These gases flow out the bottom of the tube and propel the rocket into the sky.

When the rocket is high in the air, the burning gunpowder ignites the rest of the powder, which is called the "charge."

And then—KA-BOOM!—the charge explodes.

Firework makers, who are called "pyrotechnists," add chemicals to the gunpowders to make colors. They put in charcoal to give the firework a fiery tail. By packing the gunpowder in different arrangements, a pyrotechnist can make rockets spin or explode in stages. And firecrackers in the rocket's nose add some extra boom to the rocket's zoom!

*Question sent in by Sean Cullen.*





DO

### HUMAN BODIES EXPAND IN HEAT?

Almost any material expands (gets bigger) when its temperature rises. Metals do. So does water.

Because it's about 65 percent water, your body, it seems, should expand, too. But living things deal with temperature changes differently from nonliving things.

For example, you sweat to cool off your body. You shiver when you need to warm up inside. Your body is designed to keep your insides humming at 98.6 degrees Fahrenheit at all times. (If you're sick, your temperature rises to help fight infection.)

Your body does change size during the day, though. For instance, you're usually taller in the morning than in the evening. That's because the soft discs in your spine lose liquid after being squeezed all day long. At night, the fluids build up again. Fluids make your feet swell during the day and make your shoes pinch, too. Ouch!

*Question sent in by Elizabeth Turner, Jacksonville, FL.*

# With your **ZAP PAX** video game cards you can...

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# REVIEWS

By Robert Moll

## BOOKS

### Model a Monster

by Colin Caket  
Sterling Publishing, \$7.95

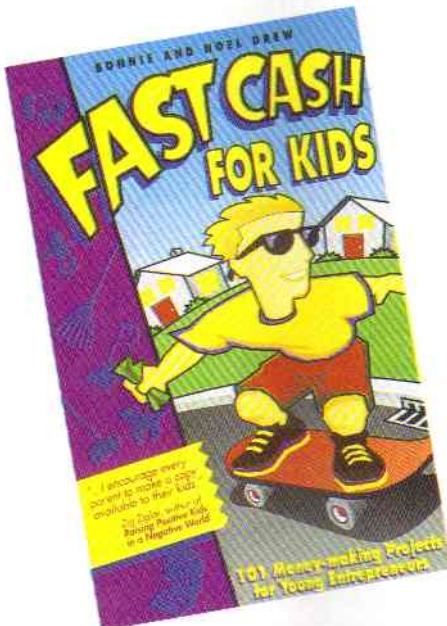
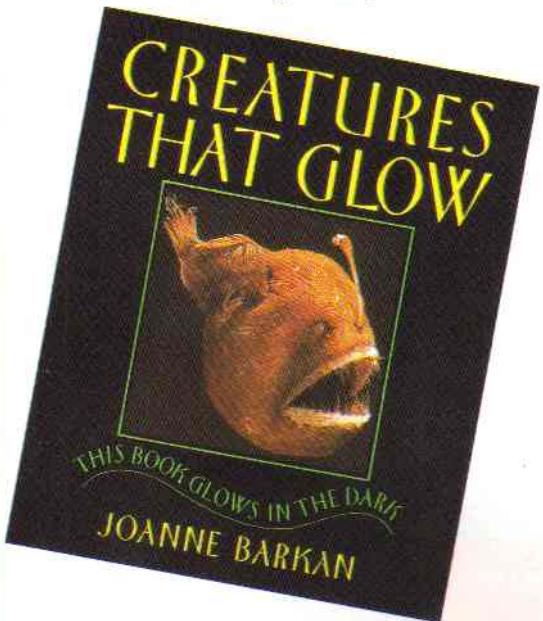
Dinosaurs have been extinct for millions of years. But now you can bring them back to life. This book shows you how to make dinosaur models out of everyday objects like coat hangers, cardboard and even ice cream. They're fun to play with, but don't let these monsters mash your room!



### Creatures That Glow

by Joanne Barkan  
Doubleday Publishers, \$13.99

It's hard to look at most books in the dark. But not this one! That's because the pictures glow. First read about bugs, fish and plants, then flick the switch and watch them shine. You'll find this book enlightening!



**Fast Cash For Kids**  
by Bonnie and Noel Drew  
Career Press, \$9.95

Psst! Need a few extra bucks? This book shows 101 ways to make money: Start a pool-cleaning business, walk your neighbors' dogs or mow lawns. You may not become a millionaire overnight, but with these tips and a little work, you should fill your piggy bank.

## SOFTWARE

### Toe Jam & Earl

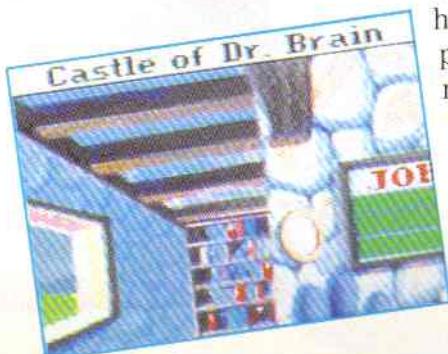
for *Sega Genesis*  
Sega of America, \$59.95

Lost in space, alien rappers Toe Jam and Earl crash on a weird planet: Earth. While searching for parts of their ship, they must dodge such strange Earthlings as the nerdherd and the insane dentist. Hi-top sneakers, tomatoes, slingshots and other goodies picked up along the way help this funky duo survive. Talk about being *alien-ated*!



**Castle of Dr. Brain**  
for *IBM* and *compatibles*  
Sierra On-Line, \$49.95

Mad scientist Dr. Brain needs a lab assistant. To get the job, you must pass a test: Find Dr. Brain, who's hiding in his castle. No problem? Problem! To get from one room to another, you have to solve mind-boggling puzzles. Great graphics make it fun to figure out word games, mazes and other fiendish challenges. Locating Dr. Brain takes real brain power!



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MALL MADNESS  
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12-SPEED MOUNTAIN BIKE  
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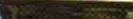
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CAMEO  
MAKEUP KIT  
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SEE THROUGH PHONE  
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# TAKE A LOOK AT THE HOTTEST

**A**re you looking for a different way to spend your summer? How about...summer school? Not the usual kind, but one where you can fly a plane, dig in a ruin or dive with sharks!

We're talking cool school. The kind you won't mind staying after class for. Here's a look at what some kids were up to last summer!

## Up in the Air

Some people might say these kids have their heads in the clouds. And they'd be right! They're students of Cloud Chasers, a flight-training program for kids in Plainville, CT. These young pilots learn everything about planes—from repairing engines to coming out of spin dives.

Students take turns

PHOTO © CLOUD CHASERS



A student pilot gets ready for take off.

# CLAS

piloting a single-engine aircraft. During each flight, an instructor is on board. (By law, students can't fly alone until they are 16.)

Before flying, students spend time in "ground school." They have to know where all the instruments are and what each one does. "It's a lot of hard work, but it's exciting," says 11-year-old Chris Sabolcik.

"Before you get into a plane, you have to go through a checklist to make sure it's able to fly and you can fly it safely," Chris told CONTACT. "Then, once you're in the plane, you have to go

through more checklists. You start up the engine, taxi down to the end of the runway, push in the throttle and then...take off!"

What does it look like from the pilot's seat?

"At about 1,500 feet, there's just blue all around," Bridget Chalker, 12, told CONTACT. "The cars and buildings look like miniature models."

Before joining Cloud Chasers, Bridget had never been in a plane. So, why did she want to *fly* one? "Well, flying a plane isn't an everyday thing, especially for somebody who's 12 years old. It's a challenge!" Is it scary? "Not for me," she says. "I'm not afraid of heights."

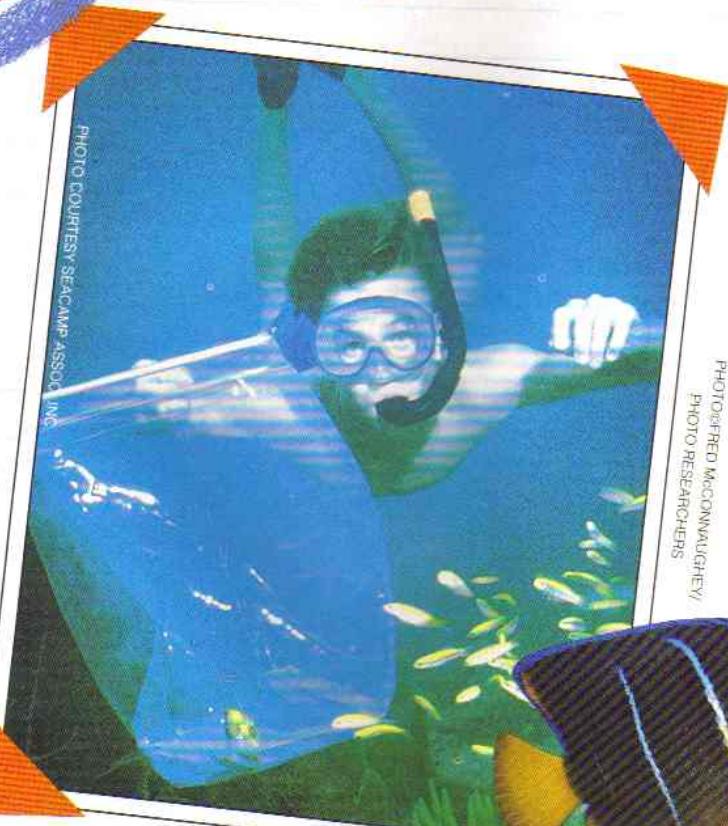
For more information on Cloud Chasers, write to: Cloud Chasers, Interstate Aviation, Inc., Robertson Airport, Plainville, CT 06062.

# SUMMER SCHOOLS AROUND



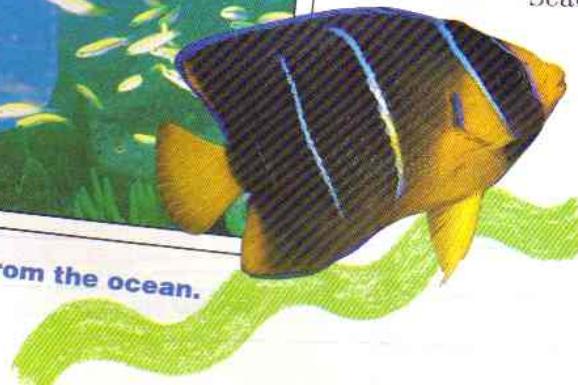
# ACTS

By Beth Chayet



PHOTOGRAPHED BY FRED McCONNAGHAY  
PHOTO RESEARCHERS

Samples are collected from the ocean.



## Hello Down There

"The water was deep and clear. Beautiful colored fish swam around us. Then, they appeared—sharks! They were nurse and lemon sharks," Ingrid Sabena, 13, told CONTACT. "I was a little scared. But they won't hurt you unless you bother them. And I wasn't about to bother them."

This summer experience is not for land lubbers! At Seacamp, kids spend most of their time either on the water, in the water or underwater. Seacamp is located on Big Pine Key in Florida. It's right near the only living coral reef in the U.S.

At Seacamp, kids get to explore coral reefs, swim with tropical fish, survey shipwrecks and take part in water sports. There's snorkeling, and if you're 13 or older, there's scuba diving.

"One time, we swam to a shipwreck. It was this old boat under water with fish swimming around it. You could see the motor and broken wood," says 13-year-old Joshua Beck.

Seacamp's motto is "to observe and not disturb." "Whatever we took out of the water, we put back in," Ingrid explains. "That's the sealife's homes. If somebody took us out of our homes, we wouldn't like it."

For more information on Seacamp, write to: Seacamp Association, Inc., Route 3, Box 170, Big Pine Key, FL 33043.



Kids use a screen to look for artifacts.

## Can You Dig it?

A group of kids in Flagstaff, AZ, spent their summer doing a lot of dirty work. But they didn't mind. That's because they were digging up pieces of Native American history from an ancient village. The village, Elden Pueblo, was the 11th-century home of the Sinagua (say: *sin-OW-a*) Indians.

The young archeologists (say: *ark-e-OL-o-jists*) were taking part in a summer adventure program run by the Museum of Northern Arizona. By digging up the remains of an ancient city, the kids learn how people lived a long time ago.

Each pair of kids was assigned a certain space to work in. Armed with trowels, brushes, dustpans and buckets, they carefully removed layer after layer of dirt. "First we had to loosen the dirt in the bottom of our area of the ruin. Then we

## Not Just Monkey Business

Don't freak out if you see a 12-foot-long Burmese python wrapped around six Junior Keepers at the Audubon Zoo in New Orleans, LA. The kids are just doing their job.

Junior Keepers spend one month during the summer in zoo school. Here, they learn how to safely handle animals. They also learn how to teach others to appreciate and protect animals.

After the training program, Junior Keepers work at least three hours each weekend. "It's a whole year commitment," says Junior Keeper Michelle Martinez, 12. "But ever since I was little, I've always wanted to work with animals."

While the kids don't come in contact with lions or tigers or bears, they do work with lizards, birds, alligators, chinchillas, ferrets and hedgehogs! The Junior Keepers prepare the animals' special diets, feed them and clean out their cages.

The Junior Keepers also teach zoo visitors about animals. "People need to know more than just about animal habitats being destroyed. You also have to let people know why this is happening and what they can do to help," Junior Keeper Nia Coleman, 13, told CONTACT.

"Endangered species don't have to become

extinct," adds Michelle. "We want the same animals to be around when we get older."

If people can't go to the zoo, the Junior Keepers take the zoo to the people! The Zoo Mobile travels to hospitals and retirement homes. "People's faces really light up when they get to touch animals," Nia describes. "One time this lady said, 'I'm 97 years old and this is the first time I've ever touched a snake.'"

"Some people are kind of funny about snakes," says Michelle. "But they're my favorite animal."

**For more information on the Junior Keeper program, write to: Audubon Zoo, Junior Keeper Program, P.O. Box 4327, New Orleans, LA 70178.**

PHOTO COURTESY BRIAN GIBBONS



**Junior Keepers hold a boa constrictor.**

brushed it into a pan," explains Peter Johnston, 12. To find the artifacts, or objects, from the past, the students sifted the dirt through a screen.

How did they know an artifact when they saw one? "One way to tell the difference between a bone and a rock was to lick it," says nine-year-old Marta Johnston. "If it stuck to your tongue, it was a bone." (Tiny holes in a bone absorb moisture from your tongue.)

Some of the artifacts the young archeologists uncovered were 800 to 900 years old. "I found a couple of arrowheads, lots of clay dolls and some stones that the Indians used to smooth pottery," 12-year-

This bird-shaped jar is 800 years old.

old Leif Munson told CONTACT.

"It's more fun to learn about history by doing something like this instead of reading about it," adds Sandra McLaughlin, 14.

"But you have to be really patient. You don't find stuff all the time."

The artifacts that were found will allow scientists to uncover the secrets of the Sinagua culture. "Studying other cultures may help us solve problems in our own culture," says Leif.

**For more information on the young archeology program, write to:**

**Museum of Northern Arizona, Education Department, Route 4, Box 720, Flagstaff, AZ 86001.**

PHOTO COURTESY COCONINO NAT FOREST/PETER J. PILLES, JR.

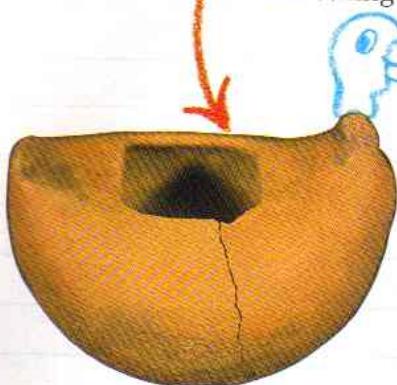
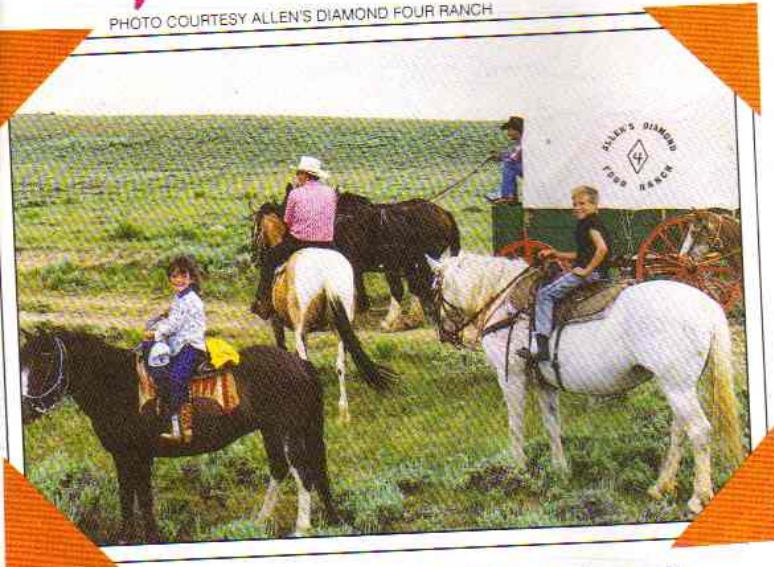


PHOTO COURTESY ALLEN'S DIAMOND FOUR RANCH



**Yippee! Campers are about to hit the trail.**

## Giddy Up

"Get up!" our guide yelled. It was 7:00 A.M., and we were camped out in the wilderness in the Wind River Mountain Range in Wyoming," describes nine-year-old Briant Wiles.

"We walked down to the stream and brushed our teeth. Then we cooked bacon and eggs over a campfire. By 8:00 A.M., we broke camp—packed away our tents and equipment, saddled our horses, loaded up the pack horses and got ready to leave. Then we rode for a full day," he adds.

This was only one of 10 days a group of happy

campers spent kicking up dust on a pack trip through the mountains. There were no phones, no TV and no showers!

Before setting out into the wild West, the kids learned lots of new skills: horseback riding, fishing, map reading, cooking, hiking and survival. And while out on the dusty trail, each kid got to drive a horse-drawn chuckwagon. The young wagoners rode along the Oregon Trail—the same trail traveled on by thousands of pioneers heading West in the mid-1800's. "And it's still bumpy!" laughs Theresa Emmerich, 11.

Most of the trip was spent on horseback. Each day the kids would ride about 10 to 15 miles. Sometimes they stopped to fish or to swim in an icy cold stream. "One time, my friend and I caught 10 fish each in 15 minutes," says Theresa.

When it began to get dark, the group rode off the trail and set up camp. "Most of the time, we were out in the middle of nowhere," Meg Schreiber, 11, told CONTACT. But for the night, it was their home on the range.

**For more information on the youth pack trip, write to: Allen Brothers Diamond Four Ranch, P.O. Box 243, Lander, WY 82520. ♦**

PHOTO COURTESY ALLEN'S DIAMOND FOUR RANCH



# TIME

By Margie Jaworski

**S**orry, Marty McFly: Time machines don't really exist. But there is a device that carries objects from the past into the future. It's called a time capsule.

A time capsule is simply a container in which people place objects from their daily lives. Then sometime in the future, other people open the container and learn about life in the past.

Let's say that when your great-grandfather was a boy, he put a few things that interested him—a crank from a model-T Ford, a newspaper headline about the sinking of the *Titanic*, a gas lamp, a derby hat, a crystal radio set, a baseball autographed by Babe Ruth—in a sealed box. On your tenth birthday, he gives you the box. You've got a time capsule!

Time capsules come in all shapes and sizes. Some are made of stone, tin, brass or other metals. Some are boxes or safes.

"We've heard of kids who've used trash bags," says Paul Hudson. "But that's probably not a good idea."

Hudson is one of the founders of the International Time Capsule Society (ITCS). Its goal is to make a list of all known time capsules. And they hope to find lost capsules. The ITCS is located at Oglethorpe University in Atlanta, GA.

## For the Ages

Oglethorpe University is also the home of one of the greatest of all time capsules, the "Crypt of Civilization." (A crypt is an underground vault.) This amazing time capsule will give future peoples—or perhaps alien visi-



**DON'T HAVE  
A COW, MAN!**



tors to Earth—a record of our civilization.

The crypt is about the size of a swimming pool. It's inside the granite foundation of a building. (Building foundations are so strong, they can last centuries). If visitors from space ever do dig it up, they'll find thousands of objects, both silly and serious.

They include a set of Lincoln Logs, encyclopedias on microfilm, model trains, instructions on how to perform surgery, a plastic ashtray, binoculars and a Kodak camera. There are film clips of Adolf Hitler and Popeye the

# SAVERS

## CAPSULES HOLD PRESENTS FOR THE FUTURE



Sailor, as well as Donald Duck and Lone Ranger dolls. And for tongue-tied extraterrestrials, there's a device to teach them English.

"It will be an incredible reference for archeologists of the future," says Hudson.

In 1940, the caretakers made the crypt airtight—to better preserve the objects inside. Then they welded shut its huge, stainless steel door. The Crypt of Civilization is supposed to be opened in the year 8113. Why that year? Well, according to the builders of the crypt, civilization began in Egypt in 4241 B.C. Work on the crypt started in 1936, which is

6,177 years after 4241 B.C. And 6,177 years after 1936 is 8113 A.D!

Sometimes it's hard to recall where you left your sneakers a day ago. Imagine trying to remember where something was buried six centuries ago! Luckily, the U.S. government recorded the latitude and longitude of the crypt. So if future people can find those measurements...

The walls of the crypt look a little like those of an Egyptian burial chamber. That's no coincidence. The idea for the crypt came from the tombs of the ancient Egyptians.

"Egyptian burial chambers—

like the Pyramids—were, in a way, ancient time capsules," says Hudson. "Much of what we know of Egyptian culture comes from objects found in these tombs."

### Capsule "Keepers"

Modern time capsules are based on a "cornerstone-laying ceremony," explains Hudson. During this ceremony, people place interesting objects inside the cornerstone of a new building. It's opened when

the building is torn down.

The first time anyone used the words "time capsule" was during the 1939 World's Fair. One large company gave that name to a seven-foot-long, torpedo-shaped container. Now stored in Flushing Meadow, NY, it will be opened in 5,000 years—if anyone is around to open it!

There will definitely be people around for the opening of the Washington State Centennial capsule. It will take place in 2014. Located in Seattle, WA, the time capsule was filled in 1989. Then it was placed in a large safe. Attached to it, like a honeycomb, are 16 identical, steel time capsules—each of them empty. Every 25 years, another capsule will be opened, and new objects put in it.

Hundreds of volunteers, all 10 years old in 1989, are the "Keepers of the Capsule." In 2014—

when they are 35—the "Keepers" will put new items in the first of the 16 capsules. They'll also choose new "Keepers." By the time 2389 rolls around, people who open the capsule will know what life was like over the centuries.

The Washington State Centennial capsule is one of about 10,000 time capsules in the United States. When the U.S. held its 100th anniversary in 1876, people celebrated by burying hundreds of time capsules. And for the 200th anniversary, in 1976, every state and U.S. territory made a time capsule. Many will be opened in 2076.

### The Lost Capsules

Unfortunately, early time capsules have been lost. And new ones may be lost unless people keep careful records. "The odds

are that people will forget about time capsules," explains Paul Hudson. That's why the ITCS is trying to track down lost ones.

For example, there is the *M\*A\*S\*H* time capsule. This was buried by the cast of the hit TV series in a secret ceremony. It contains props and costumes from the show. It was buried in 1983, somewhere in a movie studio parking lot in Hollywood. But no one remembers where.

One lost capsule is buried somewhere in Kingsley Dam, in Lake McConaughy in Nebraska. In 1941, workers lowered the copper capsule into the three-mile-long dam. The capsule's creators sent a plaque noting its exact location to the state capitol. But it got lost.

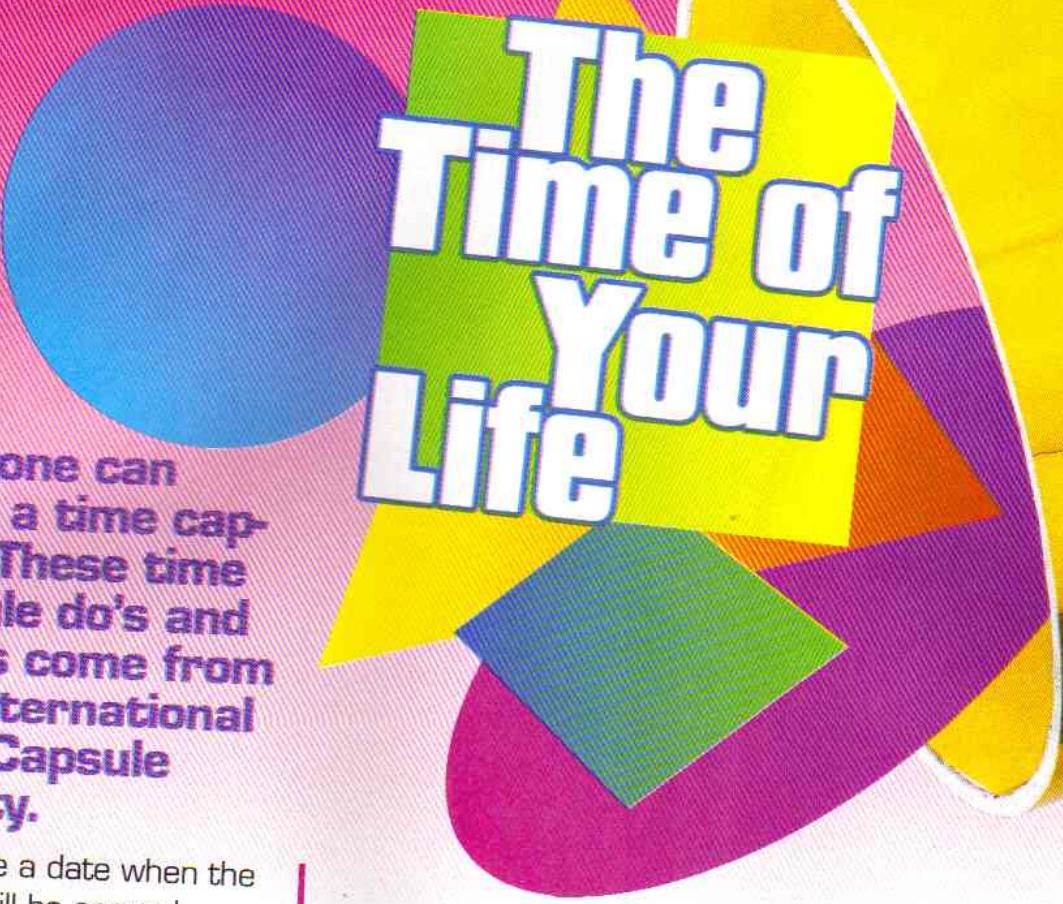
Then again, maybe some time capsules should *stay* lost. Recently, the town of Washington, PA, opened a time capsule from 1869. The treasure inside? Half a set of false teeth! ◆

**A woman's hat was one of the items placed in the Westinghouse Time Capsule (left), which was buried at the New York World's Fair in 1938.**

PHOTOGRAPH BY STAN FELLERMAN



PHOTOGRAPH BY WESTINGHOUSE ELECTRIC CORP.



# The Time of Your Life

Anyone can make a time capsule. These time capsule do's and don'ts come from the International Time Capsule Society.

1. Choose a date when the capsule will be opened.
2. Select a container. As long as the inside of the container is cool, dry and dark, your objects can be preserved.
3. Find a safe location. It's best not to bury your time capsule in the ground—thousands have been lost this way. Instead, find a good, visible place. For example, try your school's library or cafeteria. You might be able to get permission to place it in your city's town hall.

Make sure to mark the location of the capsule with a note describing its "mission." (The mission is the reason for making the capsule: for

instance, to let people know what their town or city was once like. Or to remind you or your friends what you were like as kids.)

4. Include a variety of things. Think about what would interest people of the future. Put in funny and serious items: for example, Madonna posters, a list of your favorite TV shows, baseball cards or presidential campaign buttons. Keep a list of all items sealed in the capsule.

5. Have a sealing ceremony and take pictures of the event. Give your capsule a name.
6. Don't forget your time capsule. Keep interest high

by holding anniversary ceremonies. (In honor of their city's time capsule, Braintree, MA, has an anniversary celebration every July 4th. They check to make sure it's still locked.)

7. Inform the ITCS (at the address below) about your completed time capsule. They will add your timely treasure to their computer list.

To find out more about time capsules, send a self-addressed, stamped, business-size envelope to:  
**International Time Capsule Society, c/o Registrar's Office, Oglethorpe University, Atlanta, GA 30319-1441.**

PHOTOGRAPH BY STAN FELLMAN

# SHARK ATTACK

HUMANS  
ARE TAKING  
TOO BIG A  
BITE OUT OF  
THE SHARK  
POPULATION



A shark is caught in a  
drift net that was set  
out to snare tuna.



For almost 400 million years, sharks have been swimming in Earth's waters. Ranging in length from a few inches to 60 feet, these graceful creatures of the deep have few natural enemies. After all, given their reputation, who would want to bother them? Humans, that's who! And that's trouble for some of the 350 different types of sharks. Because of people, some shark species are in danger of dying out.

That may seem like good news to folks who remember the ferocious great white shark in the movie *Jaws*. But scientists say it's bad news for everyone. If one species dies, it could upset the delicate balance of ocean life. So why aren't people upset over disappearing sharks? Possibly because sharks have a bad reputation.

But here's a fact: Shark attacks on humans are unusual. "Elephants, bees or dogs kill more people every year than sharks do," Dr. Samuel Gruber, a scientist at Florida's University of Miami, told CONTACT.

"We estimate that there are about 100 shark attacks worldwide per year. Rarely do they cause death. Maybe there is one fatal attack every other year," adds Dr. Frank Murru of Sea World in Orlando, FL. In fact, the chance of getting eaten by a shark is 300 million to one.

Dr. Murru believes that if sharks have a choice, they'd rather dine on anything but a person! "People are not the food of choice for sharks," reassures Dr. Murru. "Instead, it's a case of mistaken identity. For example, to a great white shark, a human swimmer in a black wetsuit may look like . . ."

**Hooked on a longline,  
a shark is hauled on  
board. More than 100  
million are killed by  
humans each year.**



PHOTO: GALE WEBB/MAGNUM PHOTOS, INC.

a lot like one of its favorite foods, the seal. Smaller sharks have been known to bite people in cloudy water. They sense the vibrations given off by people. And these are like the vibrations made by the fish they feed on."

## Shark Dinner

Humans may not be the food of choice for sharks. But sharks have become the food of choice for many humans. That's a big reason why these fish are dying by the thousands.

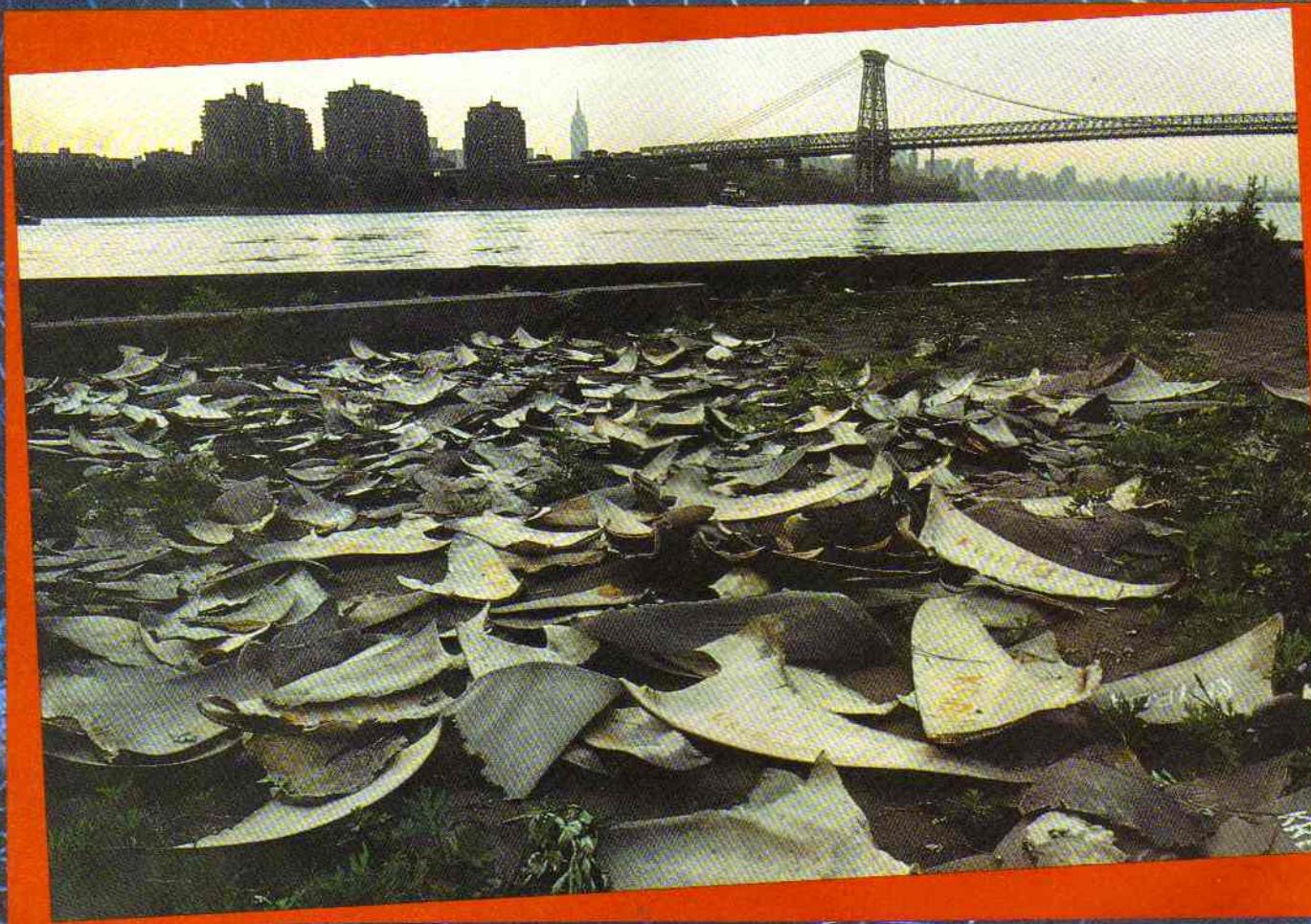
Grilled shark steak and shark-fin soup are popular foods in many countries. And fishermen get a lot of money for just the fin of a shark. Often they cut it off and throw the rest of

the body back into the water to rot.

"Sharks are being completely fished out," says Dr. Gruber. "The sharks caught this past year weigh a total of two billion pounds. That's equal to the weight of 10 aircraft carriers! And the numbers keep doubling every few years."

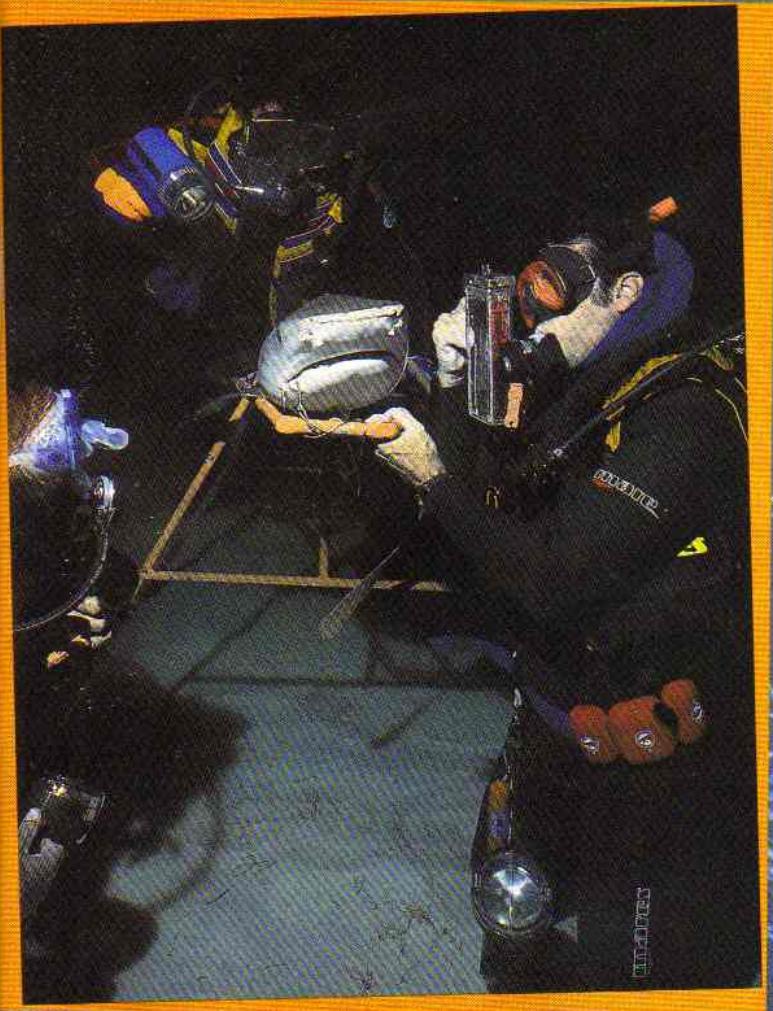
Sharks also make good trophies. Some sport fishermen hunt for shark jaws or any other part that would show off a hard-won victory.

Many shark kills are caused by the way some people fish. They use gigantic nets that drift for miles in the ocean, catching anything that gets stuck in it. Sharks and tuna travel together in packs. Often sharks are caught by fishermen who are really after tuna.



PHOTOGRAPH BY WALTER MANGUN/PHOTOS INC

Shark fins are dried on a dock in Brooklyn, NY. They will be bought by restaurants for shark-fin soup.



Better to see you with, my dear! Eye specialists give a tiger shark an underwater eye exam.

## Chain Reaction

Sharks play a very important part in the health and well-being of the oceans. If sharks disappear, this would upset the oceans' ecosystems. "An ecosystem is the relationship between all things in an animal's environment—other animals, plants, the water, air or the land," explains Dr. Murru.

Here's how it works: Sharks are at the top of the ocean's food chain. "Nothing eats a shark except another shark or a human," notes Dr. Gruber. Sharks eat almost anything: fish, seals, squid, octopii, turtles, lobsters and other sharks, too.

"As predators, sharks actually do good work," Dr. Gruber says. "Any predator worth its salt doesn't waste its energy running after healthy prey. Rather, the predator feeds on the

sick, the wounded and the weak. That's because they are easier to catch."

So sharks get rid of undesirable animals. Without sharks, the weaker animals would grow in numbers. In turn, they'd need more food sources from the ocean. If there aren't enough food sources, some animals would starve. A chain of events would begin that could change the makeup of the ocean.

Dr. Murru explains it this way: "There is a balance in ocean life. If this balance is upset, major changes would come about. Sharks help preserve the health and diversity of the ocean life."

What makes the shark killings by humans even worse is that sharks have babies—called pups—at a slow rate. So it takes a long time for the shark population to grow. Many types of female sharks give birth only once every other year. And a litter can be as few as six to eight pups. Also, it can take anywhere from 13 to 30 years for some sharks to be able to produce babies.

## A Best Friend?

Not only are sharks important to the health of the oceans, they may be important to human health, as well. The shark may be the only creature that does not get cancer. So scientists think the fish may provide clues to the treatment of cancer. Shark cartilage has been used to treat arthritis patients and burn patients. And shark corneas (part of the eye) have been used to replace the corneas in some people.

Frank Murru asks: "What if the shark really held the key to cancer and humans wiped out the species before we could study it?" That's an alarming thought. What if the feared shark turns out to be one of human's best friends?

The U.S. government is taking some action to help save sharks with its Shark Management Plan. Dr. Andrew Kemmerer, a scientist with the U.S. National Marine Fisheries Service, told CONTACT: "The Shark Management Plan sets a limit on the number of sharks that a fisherman can take. Also it sets a definite beginning and ending period for the shark-hunting season.

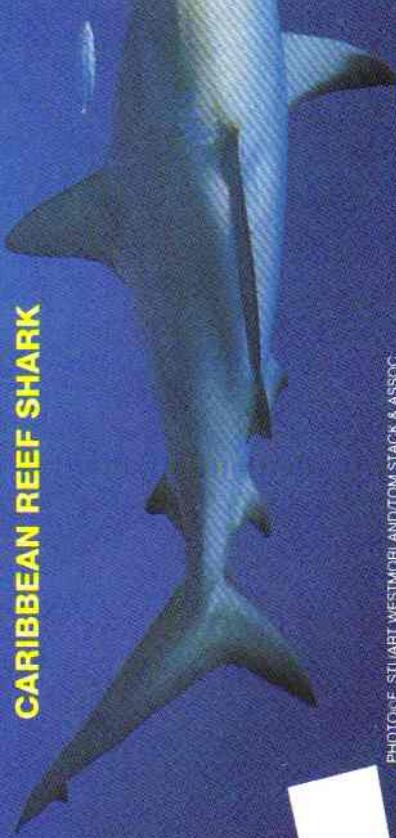
"But sharks don't know about national boundaries. They swim in all the oceans and seas of the world," says Dr. Kemmerer. He realizes that the U.S. plan is just the first step. "Once we get the United States plan into effect, our next step is to work with foreign countries. We need international cooperation." Then, perhaps, sharks will be safe in the waters once again. ♦

A 3-2-1 CONTACT  
POSTER

# SHARK SHOW SCHOOL

CARIBBEAN REEF SHARK

PHOTO: STUART WEST/MORLAND/TOM STACK & ASSOC.



**There are more than 350 types of sharks. Here are a few of them, plus some amazing shark facts!**

BASKING SHARK

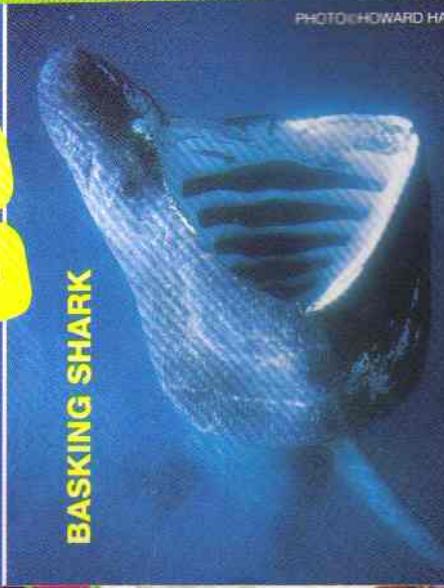


PHOTO: HOWARD HALL/HHP

- The teeth of the great white shark are very sharp. Years ago, Native Americans in Florida used the teeth for arrowheads.

- A hammerhead shark has eyes at either end of its hammer-shaped head. This may help it to better spot its enemies.

- The chance of a person being attacked by a shark is less than the chance of getting stung by a bee.

- Many sharks have to swim nonstop to breathe. And many sharks must swim to keep afloat.

- Whale sharks can grow 50 feet or longer. The smallest shark could fit in the palm of your hand.

- Some sharks will swallow just about anything. Objects found in sharks' stomachs include a barrel of nails, a suit of armor, a drum and a torpedo!

- Sharks use electricity to help them locate food. Tiny holes in their faces receive electrical signals. These signals are given off by all living creatures as they move.

- Sharks are most active at twilight and night.



HORN SHARK

PHOTO: TOM McHUGH/PHOTO RESEARCHERS

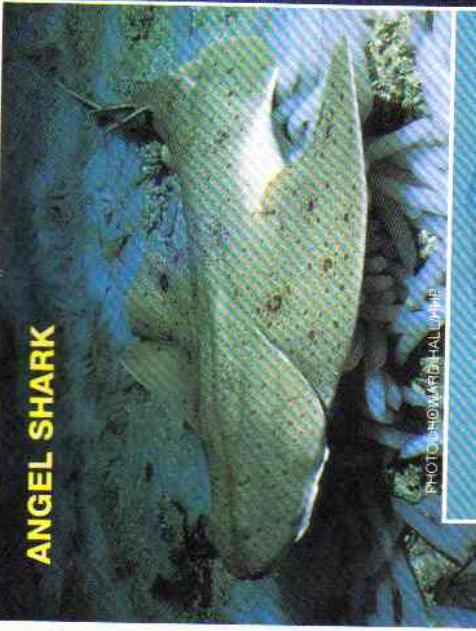


LEOPARD SHARK



PHOTO: MARTY SNYDERMAN/THE WATERHOUSE

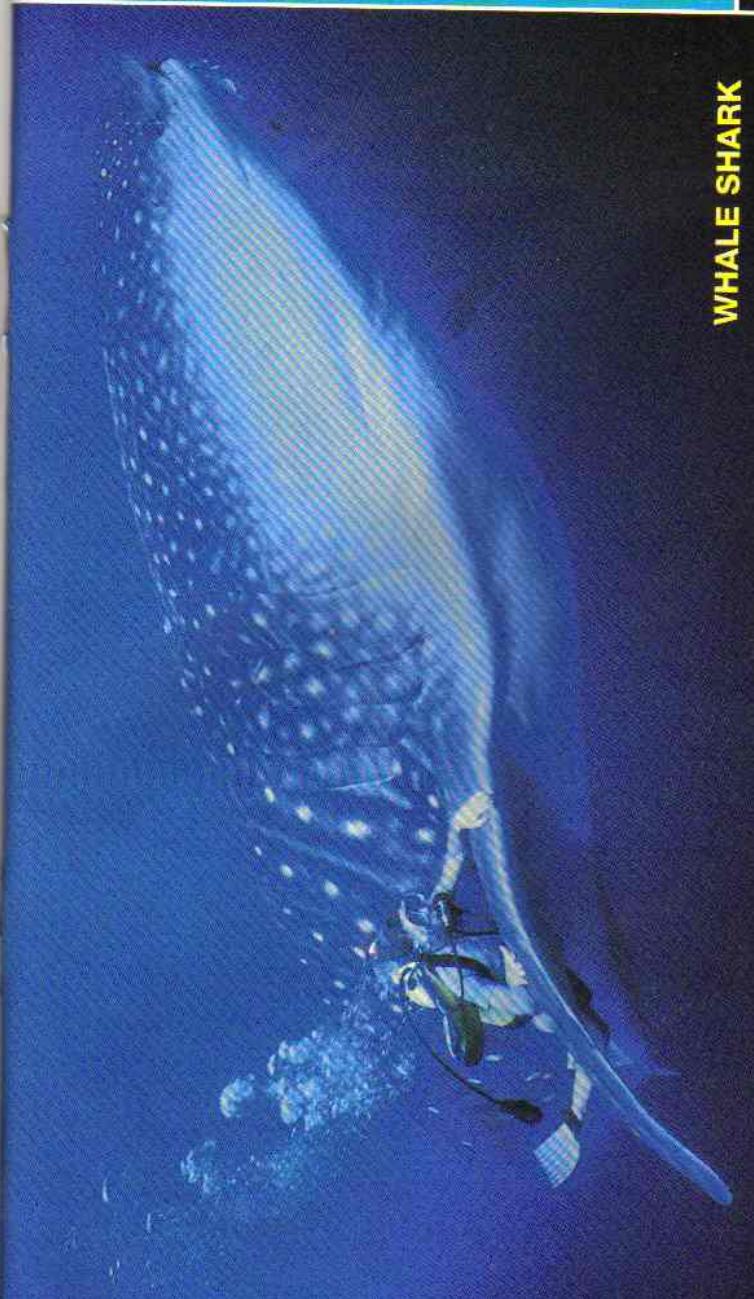
GREAT WHITE SHARK



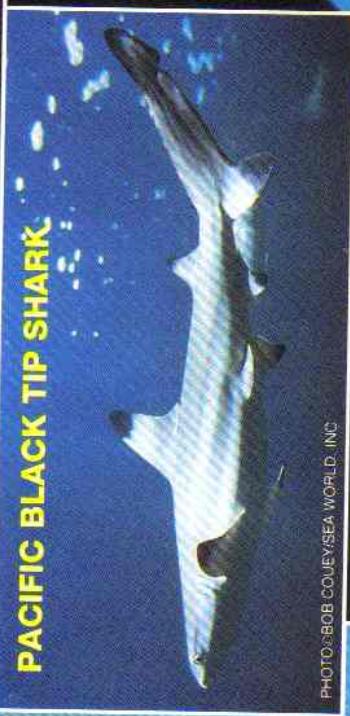
ANGEL SHARK

PHOTO©HOWARD HALL/HHP

WHALE SHARK



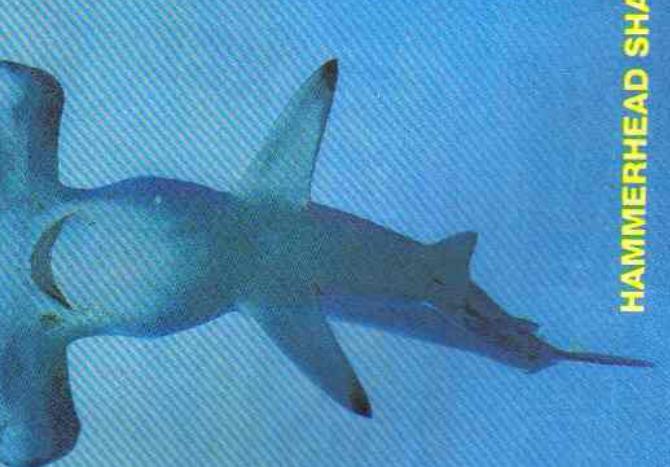
BULL SHARK



PHOTO©BOB COOKE/SEA WORLD, INC.

PACIFIC BLACK TIP SHARK

PHOTO©SEA WORLD, INC.



HAMMERHEAD SHARK

PHOTO©PAUL HUMANN/JEFFREY L. ROTMAN PHOTOGRAPHY

# WINNING

## W I N N I N G

## W A Y S

**SCIENCE  
AND  
SPORTS  
TEAM UP  
AT THE  
OLYMPICS**

By Robert Moll

**L**et the Olympic Science Games begin! Oops. We mean the Olympic Summer Games. But it's an easy mistake to make. Whether it's running, jumping, throwing or lifting, science plays a big part in every Olympic sport. Starting July 25, in Barcelona, Spain, the world's best athletes will go for the gold. Here's the science behind some of their events.

**Shaving  
Seconds**

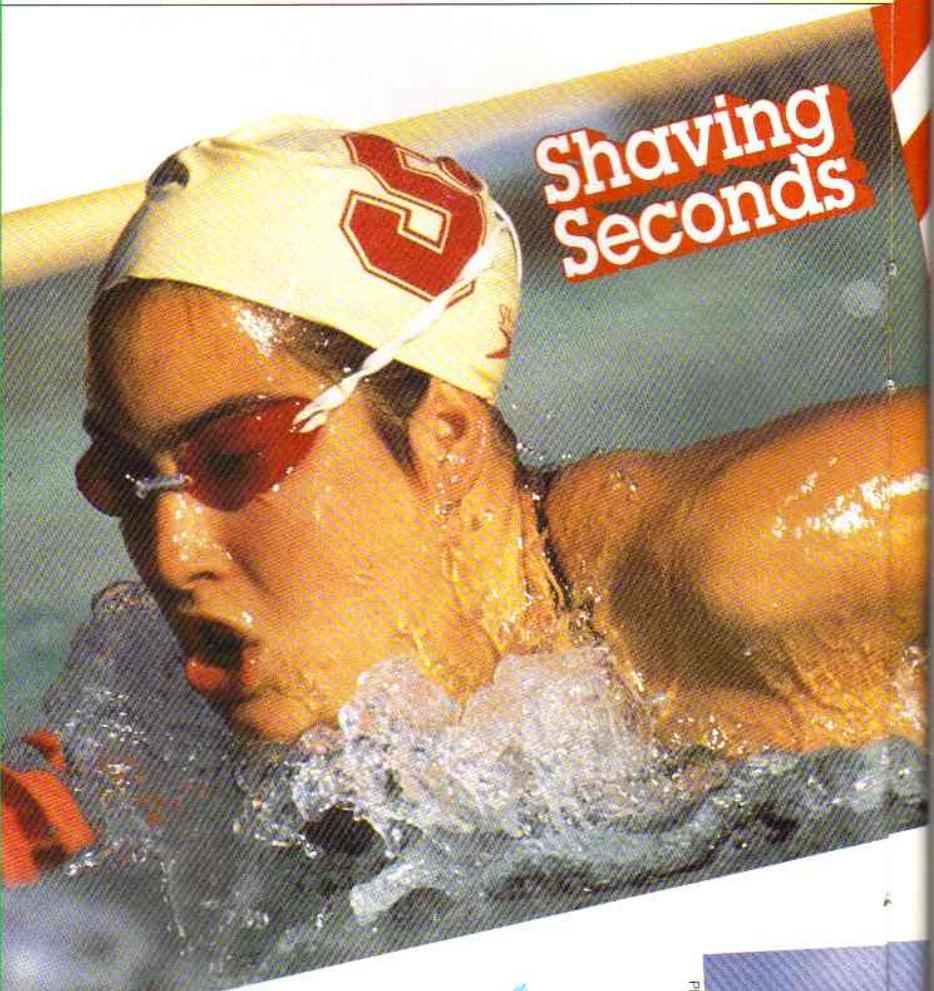


PHOTO: STEVE POWELL/LIA SPORT



Olympic swim stars would like to move through the water as fast as fish. Too bad they don't have fins and scales. But they do have swim caps. These prevent their hair from dragging along the water. Water moving against swimmers slows them down. To reduce this friction (friction happens when two surfaces rub together), swimmers make sure their bodies are sleekly shaped. They also wear skin-tight swim suits made of such fabrics as Lycra. And some competitive swimmers even shave their bodies (and their heads!) to reduce water resistance.

PHOTOGRAPH BY DAVID MADISON/OMNI

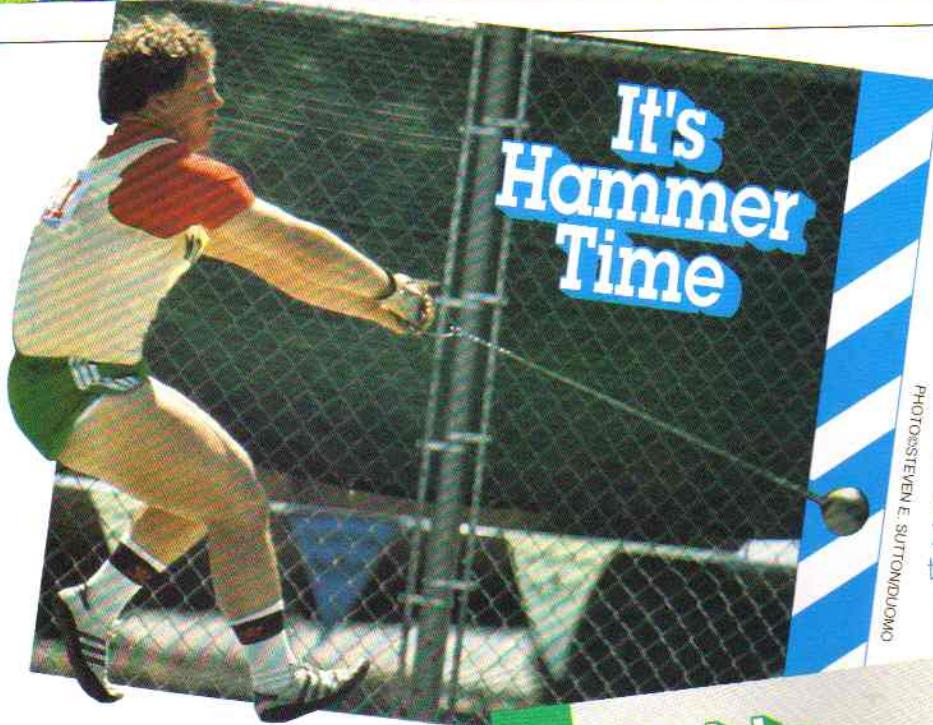
## Over the Top



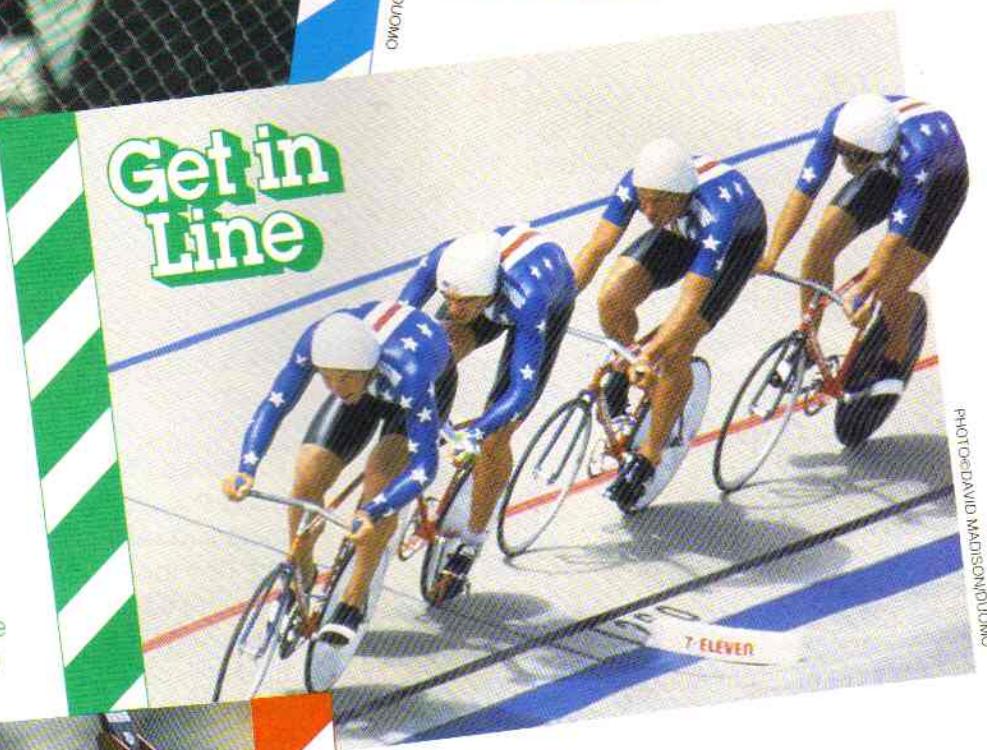
Watch a 200- or 400-meter race and you'll see something staggering: The runner in lane two starts a few meters (a meter is 3 3 feet) ahead of the runner in lane one (the innermost lane). The runner in lane three starts a few meters ahead of the runner in lane two, and so on. The athlete in the outermost lane starts farthest up the track. The innermost runner starts behind everyone else. It's called a "staggered start." Is it fair? Yes. The farther runners are from the inside of a curved track, the greater the distance they must travel around the track. Staggering a race is a way of making sure that everyone runs the same distance.

PHOTOGRAPH BY PAUL J. SUTTON/OMNI

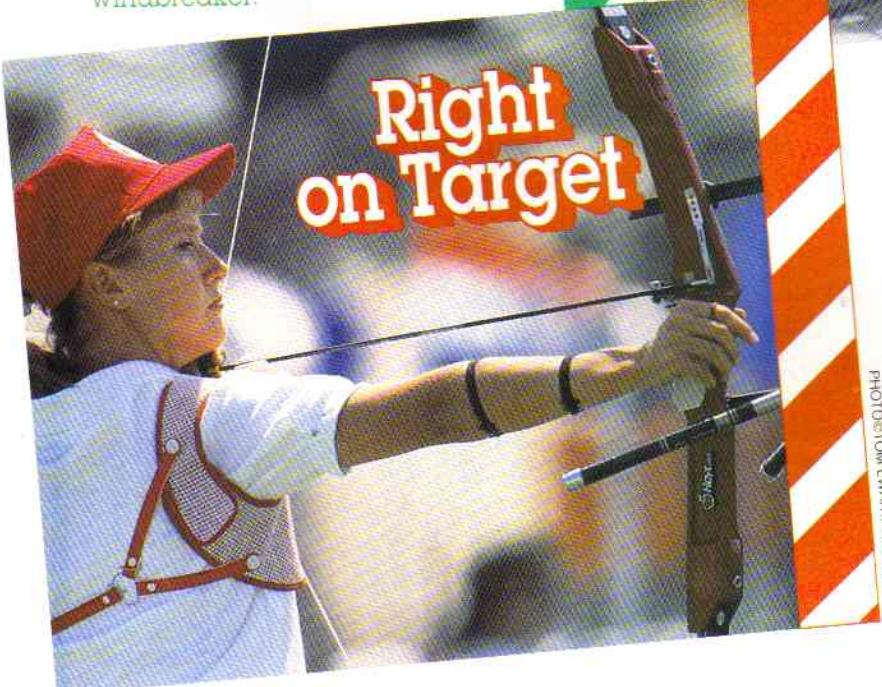
Like a plane, a pole vaulter must build up speed before takeoff. The vaulter first sprints toward the bar. When the vaulter "plants" the pole, he transfers the power of the run into the pole. This makes it bend. The faster the vaulter runs, the more energy goes into the pole, and the more it bends. As the pole straightens, it releases that power. This helps launch the vaulter. He then uses his strength and coordination to twist himself over the bar.



The hammer throw is a pretty strange "field" event. There's no hammer! Instead, competitors throw a 16-pound metal ball attached to a steel chain. The thrower holds the chain's handle and spins in a circle as fast as he can. When he lets go, the ball and chain go flying. As he spins, the thrower extends his arms as far from his body as possible. That's because the farther the ball is from his body, the faster he can make it go in a circle. If he extends his arms an extra three inches, he could throw the hammer 18 more feet!



Follow the leader. That's how cyclists win Olympic gold. In the team pursuit race, four bikes from the same team ride around a track in a single line. When they do this, the lead cyclist creates a pocket of still air for the other three cyclists. Those three now face less wind resistance. When "drafting," they pedal at the same speed—but use about 25 percent less energy! Eventually, the leader drops to the end of the line and lets another rider be the "windbreaker."



Whether you're Robin Hood or an Olympic archery champ, the important thing is to shoot straight. But archers must first figure out whether to aim with their right eye or left eye. Whichever eye they do choose, it must be their "dominant," or leading, one. The dominant eye lines up objects directly in the distance. The other eye sees distant objects at a slight angle. Archers shooting with the wrong eye will probably miss every time. (Read "Rikki's Rad Lab" to see how to find your dominant eye.) ◆

HI! IT'S ME—RIKKI, THE  
TOTALLY RAD SCIENCE  
KID! MEET THE  
RAT PACK: ALPHA  
AND BETA, MY LAB  
ASSISTANTS.

# RIKKI'S RAD LAB

What a  
"Bow"-zo!

OOPS!  
I missed.

ALPHA

2.0

RIKKI



ILLUSTRATIONS BY FRED SCHRIBER

Beta's a good sport, but he sure isn't good at them. (He even drops the sports page!) You should have seen him when he tried out for the Olympic Archery Team. Yikes! I've seen better eyes on a potato! It's obvious that he doesn't know which is his dominant eye. Want to find out which is your dominant eye? Then check out this eye-opening experiment!

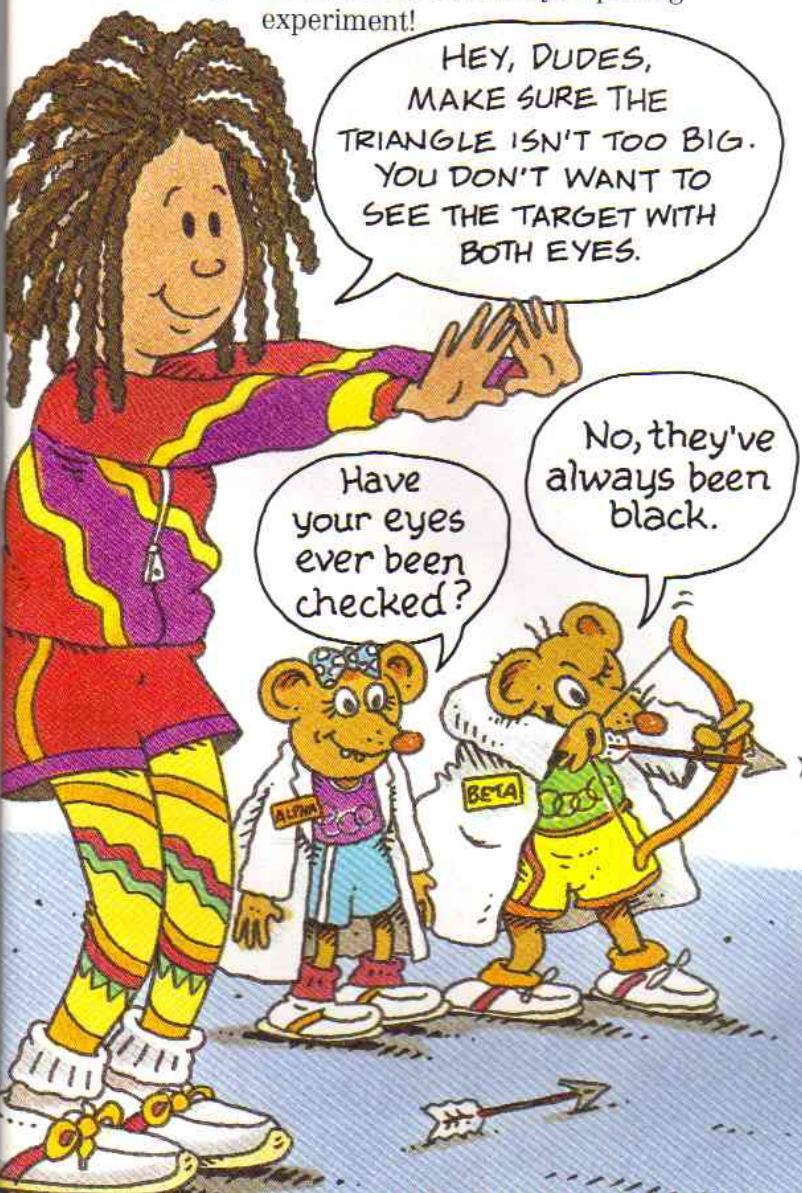
HEY, DUDES,  
MAKE SURE THE  
TRIANGLE ISN'T TOO BIG.  
YOU DON'T WANT TO  
SEE THE TARGET WITH  
BOTH EYES.

Have  
your eyes  
ever been  
checked?

No, they've  
always been  
black.

ALPHA

BETA



## What To Do

1. Put your arms straight out in front of you, palms facing forward.
2. Make a triangle with your hands by overlapping your thumbs and fingers. (The opening must be small enough so you can see through it with just one eye.)
3. With both eyes open, look at a distant object through your "triangle."
4. Keeping both eyes open, slowly bring the triangle back toward your face. The object should still be in the opening. Whichever eye the triangle ends up in front of is your dominant eye.

## Why It Works

Not sure if the eyes have it? To double check, put your arms out again. Without moving your hands or head, look through the triangle at the distant object. Close your right eye. If the object stays in the opening, your left eye is dominant. If you were an archer, you would shoot left-handed. If, when you close your left eye, you only see your left hand, then your right eye is dominant. And you'd more likely get bull's-eyes shooting right-handed! No one knows—not even Alpha—why one eye is dominant. Some people, but not many, don't have a dominant eye. So they'd be able to shoot from either side.

# THE TIME TEAM

## Jungle Jam

By  
Curtis Slepian

"Don't be a slug, Sean!"

Jenny Lopez was going to a "Save the Rain Forests" rally. But Sean Nolan wouldn't come along.

"Don't you care about the environment?"

"I've got more important things to worry about," Sean answered.

Jenny smirked. "Like what?"

"Like what to do all day now that school's out."

Then Sean got an idea. "I'll go to that rally—if you take a time trip with me right now."

When Jenny said okay, Sean thought, "What a joke. No way I'm going to some dumb rally."

At Jenny's house, they went upstairs to her room. She took out her time machine. This was a science fair project on sub-atomic particles called tachyons. The machine somehow allowed them to travel through time. But they never knew when or where it would take them.

"I think I forgot something," hesitated Jenny. But she pressed the start button anyway. With a flash of light, the teens disappeared.

An instant later, they were in the path of an out-of-control, five-foot-long rodent. The grunting creature knocked them down. A moment later, they saw what was chasing it: A five-foot-tall man. He had strange designs painted on his face. And stuck through his cheeks were little wooden sticks.

He was pointing a bow and arrow at them. The man started yelling in a strange language.

"What's he saying?" said Sean.

Jenny groaned. "I knew I forgot something: the universal translators."

(They got these on a

time trip to the 21st century. The translators let them understand and speak any language.)

The man forced the teens through a deep forest. "It's really hot here," complained Sean. "And these mosquitoes are outrageous."

"There are so many weird-looking plants and insects in this jungle," observed Jenny. "This can't be the Earth of our time."

### Strangers in a Strange Land

After a long walk, they reached a primitive village built in a clearing. Houses were made of leaves piled on wooden poles. People wearing very little clothing rushed to gawk at the teens.

Sean laughed, "Hey, we come in peace, dudes."

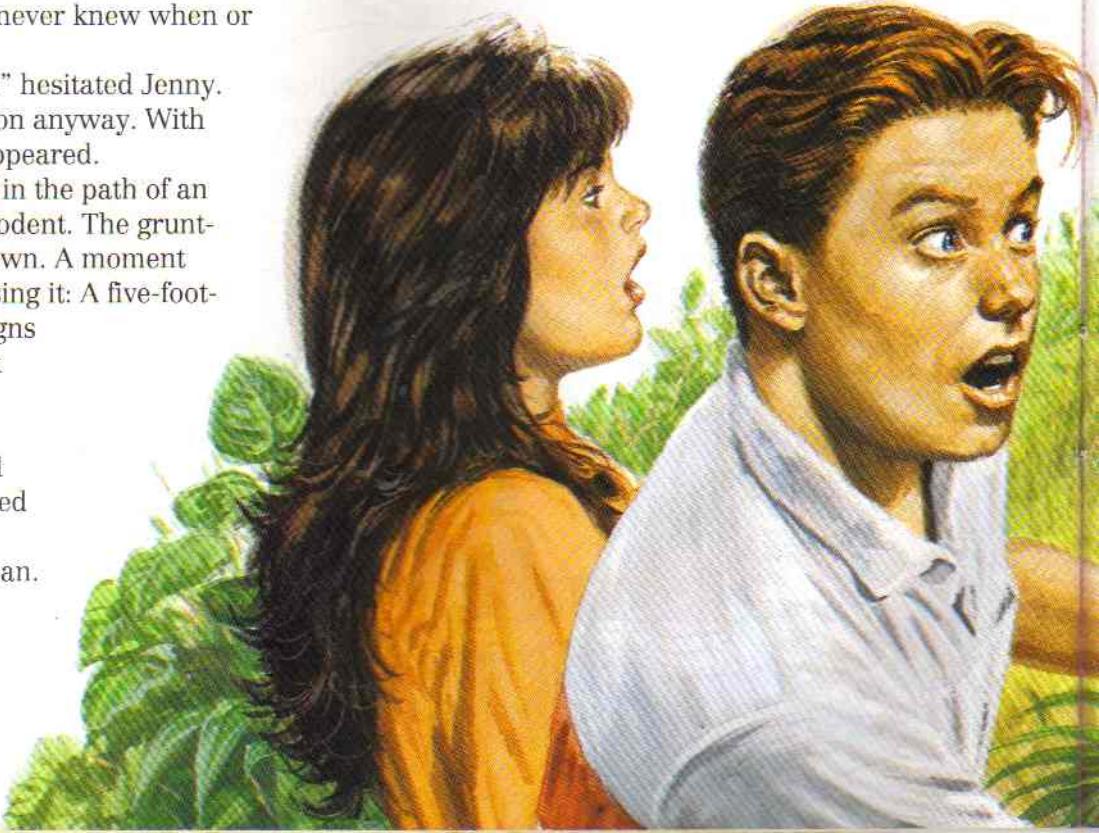
A man pushed to the front of the crowd. He seemed to be in charge. He pointed at himself and said, "Byami."

"Hi, Mr. Byami," said Jenny politely.

Byami ordered the teens' captor to lower his bow. But then another man, holding a long club, rushed up. A villager hissed what must have been his name: Komasha. Komasha threatened the teens. But Byami stepped between them. Then the two men began arguing.

Byami won the shouting match. Komasha pointed angrily at Sean and Jenny, then stalked off. The teens didn't understand his words—but they knew they had made an enemy.

"We must have landed many thousands of years in the past," said Sean.



"I agree," Jenny replied. "The animal that ran into us is definitely some prehistoric guinea pig."

"With Komasha on our case, I vote we leave."

"For sure." Jenny took out the time machine and pressed the start button. They were still in the village. She pressed it again. "Uh-oh. Maybe it broke when that animal knocked us down."

They looked inside the tachyon machine. Jenny couldn't figure out what was wrong with it. "I just put in new batteries, so that's not the problem."

Would they be stuck in this ancient world for the rest of their lives? Even though it was hot, they shivered in fear.

Just then, a villager gestured for them to follow her. In a nearby clearing, a fire was burning. People were seated on the ground, eating.

"Lunch time!" said Sean, nearly feeling happy.

Then he saw what was cooking: roasted caterpillars! He didn't want to insult the people, so he bit into a crispy insect. It sort of tasted like a greasy french fry. Only worse—much worse.

"Where's the ketchup?" he moaned.

After lunch, the teens walked around the village. Some people looked at them in wonder. Others just

laughed. "Yeah, well, you look pretty strange to me," sneered Sean. He was feeling uptight.

But the villagers seemed happy. Nature gave them everything they needed to live. The people looked a little frightening. But they acted the way most people do anywhere. Neighbors chatted, kids played, people cooked and worked. "In a bizarro way, it's kind of like home," said Jenny.

"It's going to be our home for good," muttered Sean. "Unless you can fix the tachyon machine."

The teens started to explore a trail leading out of the village. A teenager ran up to them. He seemed frightened by something along the trail. And from his gestures, it was something big and dangerous.

"I think he's trying to warn us about horrible prehistoric beasts out there," said Sean. The teens immediately turned back.

Before they got far, they 



# THE TIME TEAM

heard a whizzing sound. Sean shouted in pain. An arrow had pierced his shoulder! They saw Komasha with a bow. He was laughing.

Sean was hurt, but Jenny managed to get him back to the village. There, Byami helped Sean into an empty house. The village "medicine man" arrived. He carefully removed the arrow from Sean's shoulder. He then took out some leaves from a pouch and placed them on the wound.

Sean exclaimed, "Hey, you're no doctor!" But Jenny said, "These leaves probably contain healing medicine. Let him do it." She was right. The leaves made the pain stop.

Next day, villagers brought the teens food. They looked at Sean's arm and patted him on the head. "People here are pretty nice," said Jenny.

"Except for Komasha," said Sean. "We've got to leave before he finishes us off."

One of the visitors was a pretty young girl. Her name was Dosati. She hung around Sean for hours, talking to him. He couldn't understand her words. But he liked her anyway.

For some reason, Jenny didn't think it was too cool that Dosati spent time with Sean. Like, who did Dosati think she was?

On Dosati's second visit, she held Sean's hand. Jenny frowned. "Soon you two will be dating."

## The Wrath of Komasha

Sean soon felt strong enough to walk outside. He and Dosati strolled to Byami's house. Komasha spotted them. His eyeballs bulged. He started screaming. Dosati shook. She pointed to Komasha and then to herself. Sean turned pale. He said to Jenny, "I think Komasha is Dosati's father!"

Komasha picked up a wooden club. "Let's get out of here!" yelled Sean. The teens started running. Komasha right behind them.

"This way," shouted Sean. They darted up a trail leading out of the village. Behind them, Komasha hesitated. Jenny grabbed Sean's shirt. "We're going on the trail where the monsters are."

"I'd rather face a monster than Komasha," he gasped. They kept running.

Looking back fearfully, they saw Komasha waving his club. He was gaining on them.

And then they heard it. A terrible roaring noise ahead. The teens stopped. So did Komasha. He was frightened, but he still kept coming.

"We're trapped," cried Jenny. They decided to take their chances with whatever was ahead. Crashing through the thick leaves, they saw it! They

couldn't believe their eyes!

In front of them was a bulldozer! It was knocking down trees. Painted on its door was the flag of Brazil. "We're in the Amazon rain forest!" cried Jenny.

A crumpled Brazilian newspaper lay on the ground. Sean picked it up. "This isn't prehistoric times. It's 1995!"

Behind them was Komasha. In front of them was a guard for the company clearing the forest. He had a rifle and was moving toward them.

## The End of the Trail

Jenny took out her tachyon machine. "Please, work." It didn't. Opening it up, she saw something. One battery wasn't sitting flat. She pressed the battery down into its compartment and shut the case. Meantime, Komasha had caught up to them. He raised his club. The guard raised his rifle.

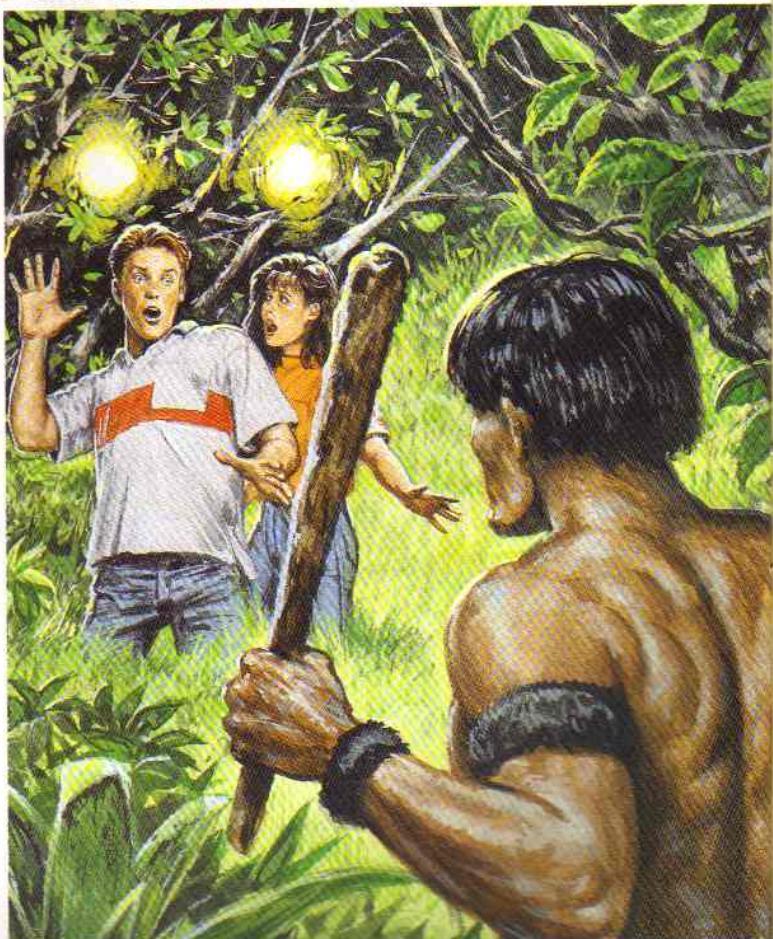
Jenny pressed the button. And...

The teens were back in Jenny's room, the instant after they had left it. They dripped sweat.

Jenny said, "If they knock down the rain forest, they'll destroy all the wonderful plants and animals that live there. And worst of all, the villagers will have nowhere to live."

Sean said quietly, "Isn't it time we went to that Save the Rain Forests rally?" ♦

ILLUSTRATIONS BY BOB LARKIN



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SAMPLE

# FACT



Prehistoric dragonflies were the size of modern-day pigeons.



Humans can grow as much as seven miles of hair in one year.



There are more than 600 active volcanoes in the world.

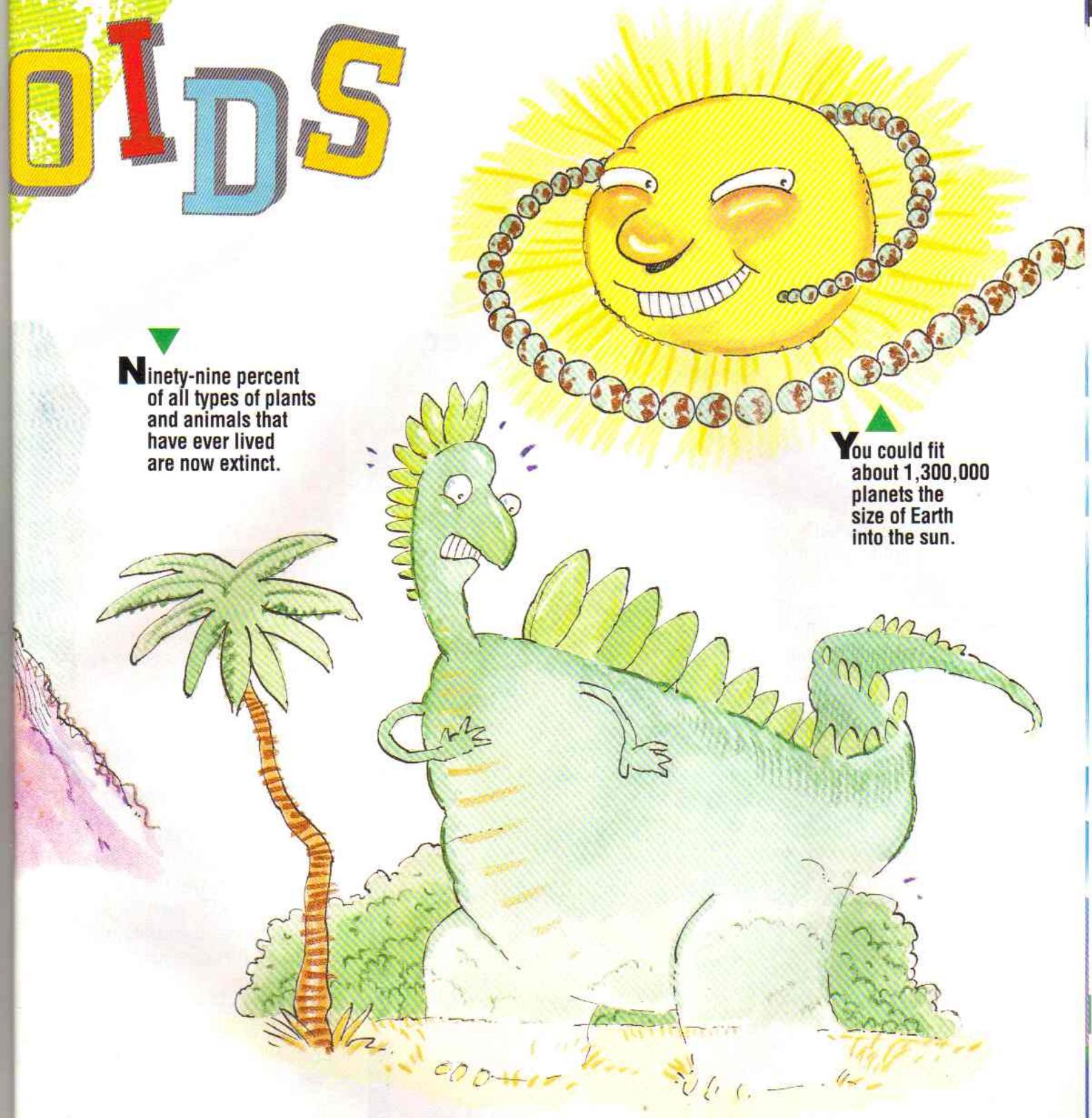


In Tokyo, Japan, there is a bowling alley with 504 lanes.

# Olds

▼ Ninety-nine percent of all types of plants and animals that have ever lived are now extinct.

▲ You could fit about 1,300,000 planets the size of Earth into the sun.



# BASIC TRAINING

## Programs For Your Computer

### LATE FOR LUNCH

For IBM, Apple II and Commodore 64 Computers

You've just buried a time capsule in your yard. It won't be opened for three hundred years. Now it's time to eat. But wait! Where's your lunch? It's buried in the time capsule, and you can't remember where you buried it. You'd better find it soon, though. Some things just shouldn't sit around for three hundred years.

In this program, your yard is a grid of X's, eight by eight. The time capsule is made of six B's. Try to find the capsule, hidden in the grid, in as few moves as possible. But hurry, or your lunch may come looking for you.

This program is written for the IBM PC. To run it on Apple II, change line 100 to: 100 ID=2. For the Commodore 64, change line 100 to: 100 ID=3.

```

100 ID=1:RANDOMIZE(TIMER)
110 UC=0: SC=0
120 GOSUB 390: GOSUB 240:
GOSUB 290
130 GOSUB 430
140 INPUT "Guess a row letter: ";RS
150 GX=ASC(RS)-64: IF GX>8 THEN
GX=GX-32
160 IF GX<1 OR GX>8 THEN 130
170 GOSUB 430: INPUT "Guess a

```

```

column number: ";CS
180 GY=VAL(C$): IF GY<1 OR
GY>8 THEN 170
190 RX=0: IF GX>=BX AND
GX<=BX+WX THEN RX = 1
200 RY=0: IF GY>=BY AND
GY<=BY+WY THEN RY = 1
210 IF RX=1 AND RY=1 THEN
GOSUB 450
220 IF RY=0 OR RX=0 THEN
GOSUB 590
230 GOTO 130
240 FOR X=1 TO 8: PX= 1: PY = 4*X
250 GOSUB 320: PRINT X;
PY=1: PX=2*X+1: GOSUB 320:
PRINT CHR$(64+X);
270 FOR Y=1 TO 8: PY = 4*Y+1:
PX=2*X+1: GOSUB 320:
PRINT "X";
280 NEXT: NEXT: RETURN
290 WX = INT(RND(1)*2)+1: WY =
3-WX
300 BX = INT(RND(1)*6)+3-WX: BY =
INT(RND(1)*6)+3-WY
310 RETURN
320 ON ID GOSUB 330, 340, 350:
RETURN
330 LOCATE PX, PY: RETURN
340 VTAB PX: HTAB PY: RETURN
350 PRINT CHR$(19);
360 FOR J=2 TO PY: PRINT
CHR$(29);:NEXT
370 FOR J=2 TO PX: PRINT
CHR$(17);:NEXT
380 RETURN
390 ON ID GOSUB 400, 410, 420:
RETURN
400 CLS: RETURN
410 HOME: RETURN
420 PRINT CHR$(147): RETURN
430 PX=20: PY=1: GOSUB 320:
FOR K=1 TO 38: PRINT " ";
NEXT
440 PX=20: PY=1: GOSUB 320:

```

```

RETURN
450 PX =2*GX+1: PY=4*GY+1:
GOSUB 320: PRINT "B"
460 UC=UC+1: IF UC=6 THEN 490
470 GOSUB 430: PRINT "On the
right track!"
480 FOR PE=1 TO 3200: NEXT:
RETURN
490 GOSUB 430: PRINT "You got
it..."
500 IF SC>9 THEN 570
510 ON INT(SC/2)+1 GOSUB 520,
530, 540, 550, 560
520 PRINT "Let's eat!": GOTO 580
530 PRINT "It's just a little stale!":
GOTO 580
540 PRINT "But leave it alone!":
GOTO 580
550 PRINT "But can you recognize
it?": GOTO 580
560 PRINT "Now don't let it get you!":
GOTO 580
570 PRINT "Yuck!"
580 PRINT SC" missed guesses.":
END
590 PX =2*GX+1: PY=4*GY+1:
GOSUB 320: PRINT ""
600 SC=SC+1: GOSUB 430: PRINT
"Sandwich is getting older!"
610 FOR PE=1 TO 3200: NEXT:
RETURN

```

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If you've written a program you'd like us to print, send it in. If we like it, we'll print it and send you \$25. Include a note telling us your name, address, age, T-shirt size and type of computer.

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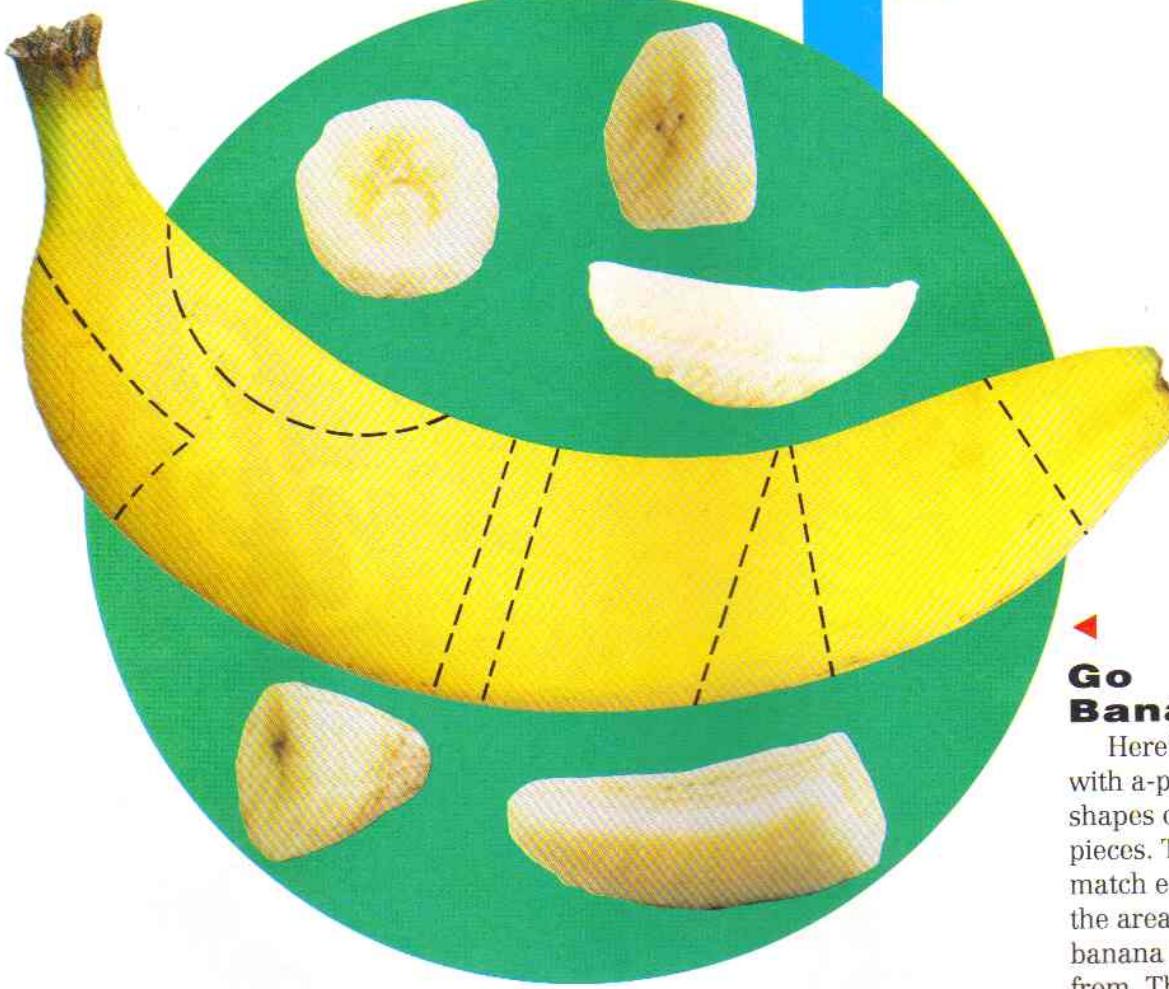


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S Q U A R E   O N E   J U I C Y  
F R I T

BITE INTO OUR MOUTH-WATERING ...



U

By Beth Chayet

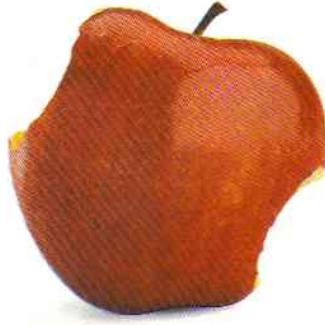
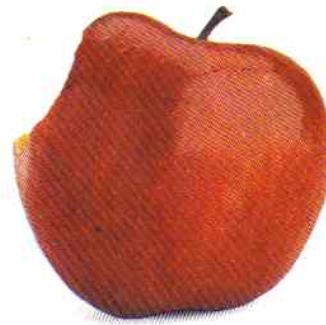
► **Go Bananas!**

Here's a puzzle with a-peel. Study the shapes of the banana pieces. Then try to match each piece to the area on the banana it was cut from. The cut-out areas are shown by dotted lines.

► **An Apple a Day**

Chomp! Chomp!

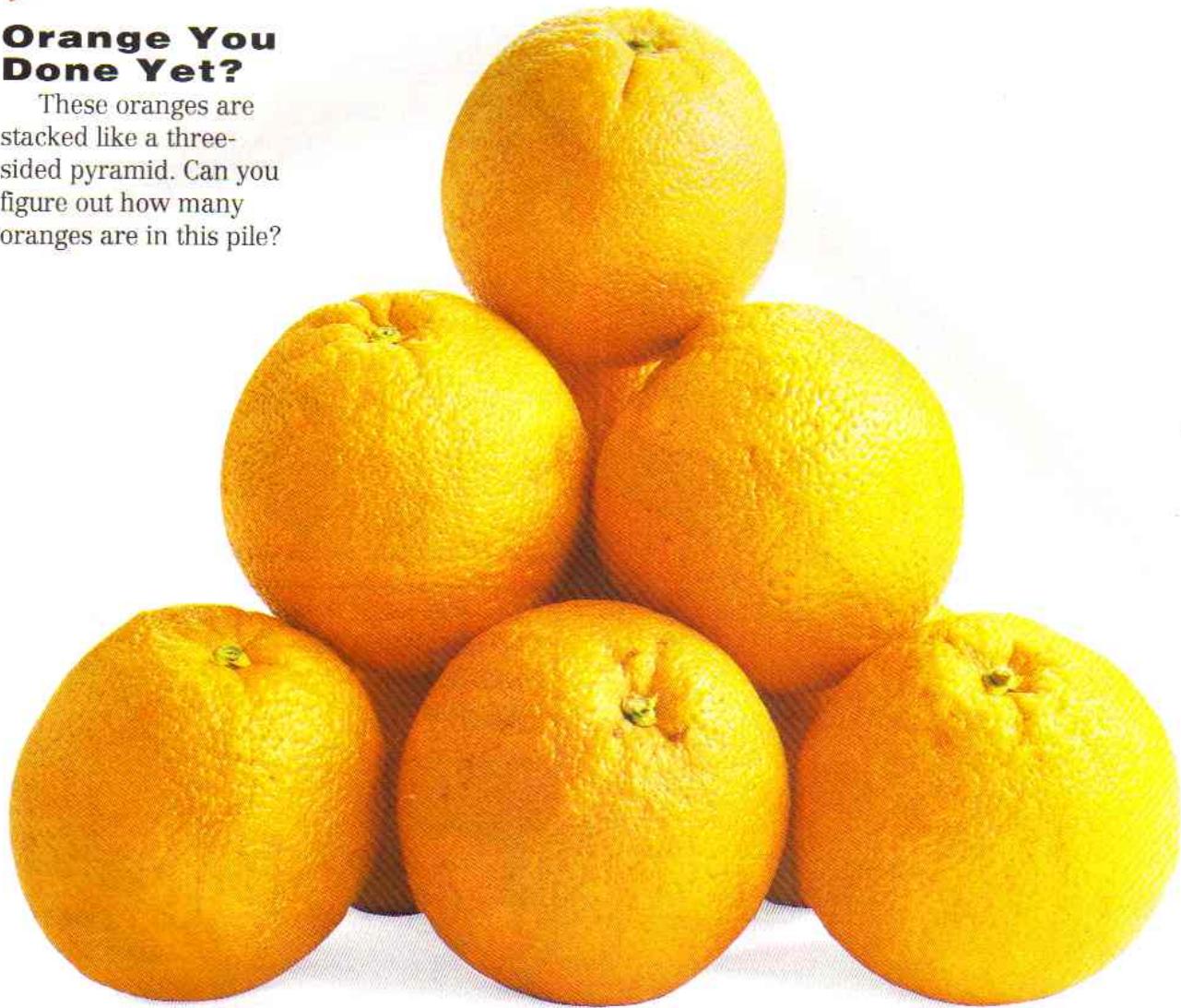
These pictures show an apple being eaten. Get to the core of the matter: Put these photos in the right order, from first bite to last.



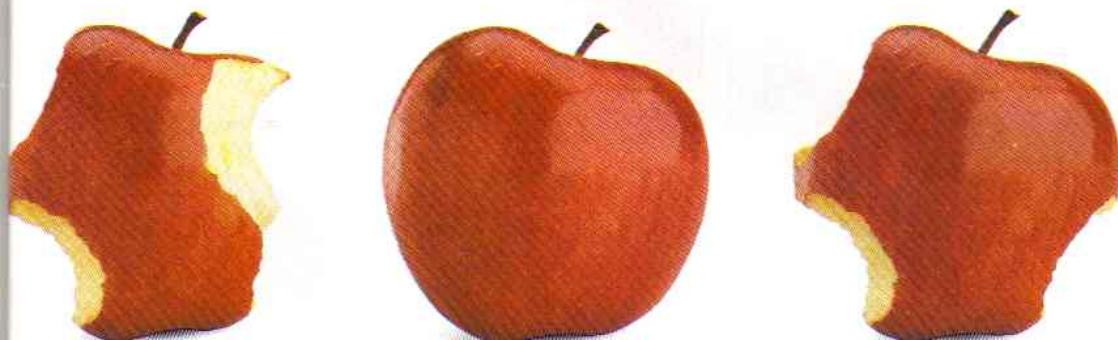
# Z Z L E S

## Orange You Done Yet?

These oranges are stacked like a three-sided pyramid. Can you figure out how many oranges are in this pile?



Answers on the Did It page.



PHOTOGRAPHY BY STAN FELLMAN

# A RACE TO THE RACES

STORY:BETH CHAYET

A SQUARE ONE COMIC

ART:KEITH WILSON

OLYMPIC MARATHON  
RUNNER IDA RUNFORIT  
FORGOT TO SET HER  
ALARM CLOCK...

THE  
MARATHON

BEGINS AT 9:00!  
I'VE GOT TO GET  
TO THE STARTING  
LINE ON TIME!

IDA HOPS ON A BICYCLE AND FINDS  
HERSELF IN THE MIDDLE OF A ROAD RACE.

THESE WHEELS WILL  
GET ME TO THE TRACK  
FASTER!

HEY! YOU DON'T  
HAVE YOUR HELMET  
ON!

YOU'RE  
GOING TO HAVE  
TO PEDAL FOR  
THE MEDAL!

WOW! SHE MUST HAVE  
HAD HER WHEATIES. SHE  
FINISHED THE RACE IN  
TWO MINUTES!

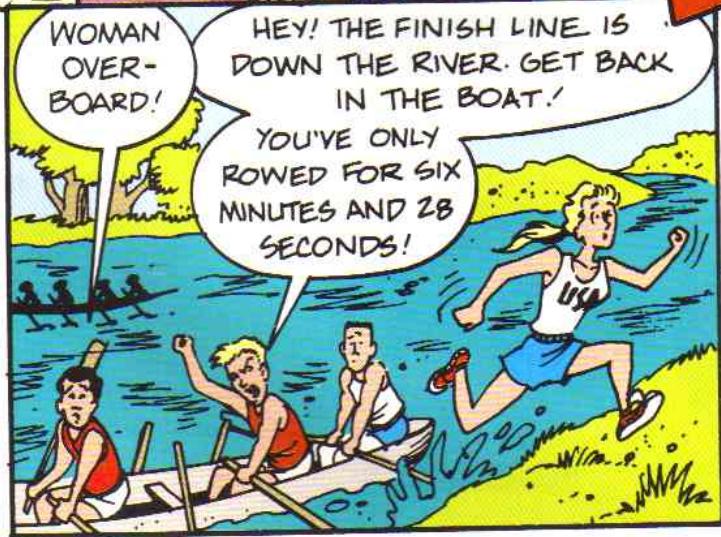
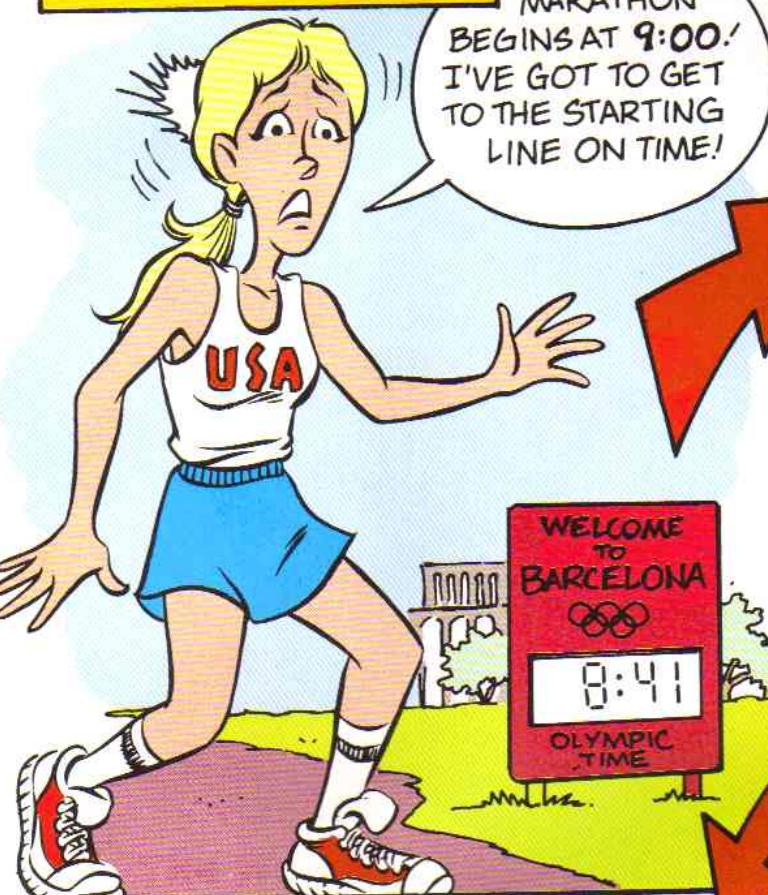
I BETTER MAKE  
LIKE A BANANA AND  
SPLIT OVER TO THE BOATS  
TO SAVE SOME TIME!

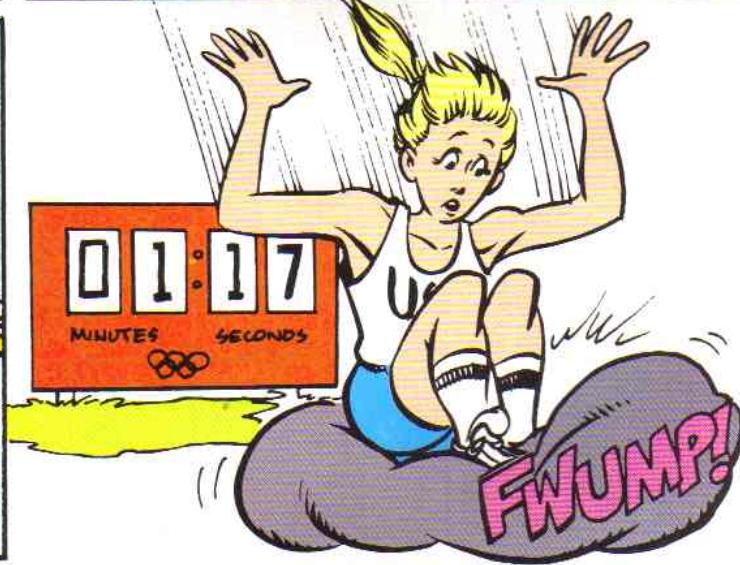
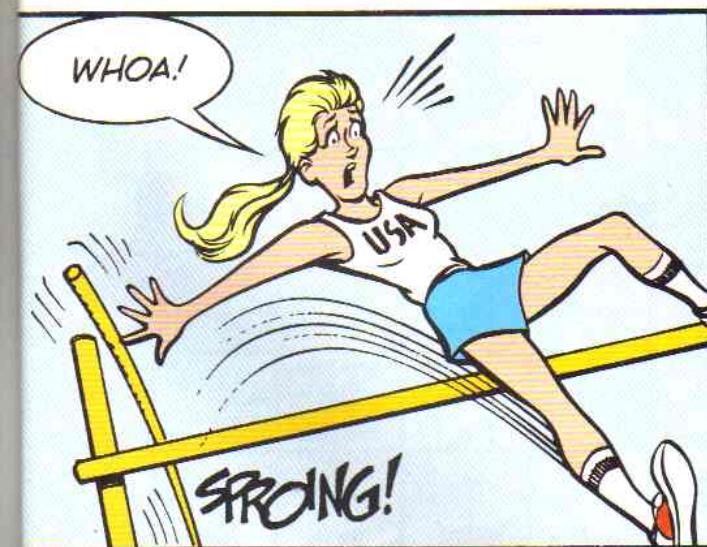
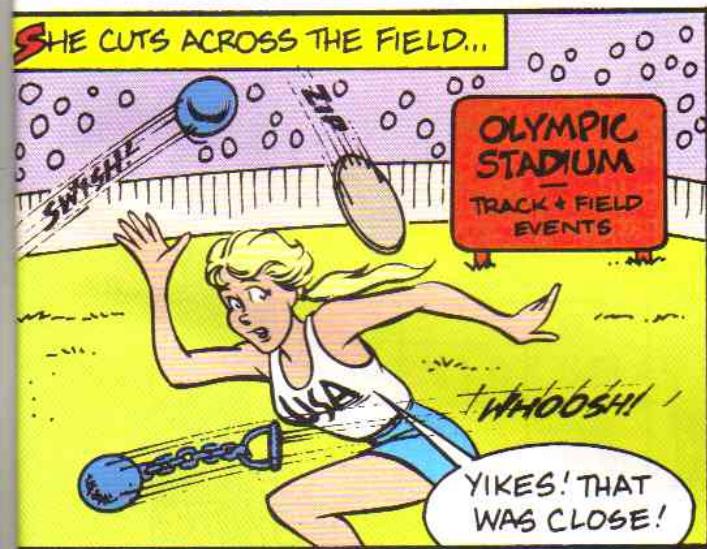
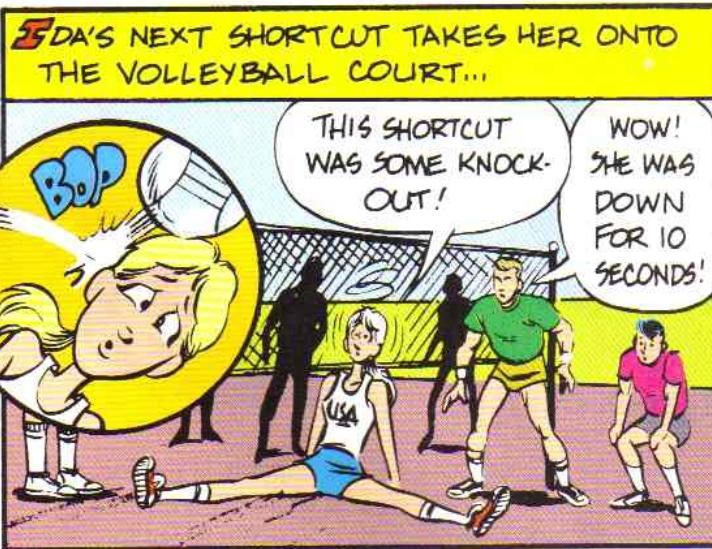
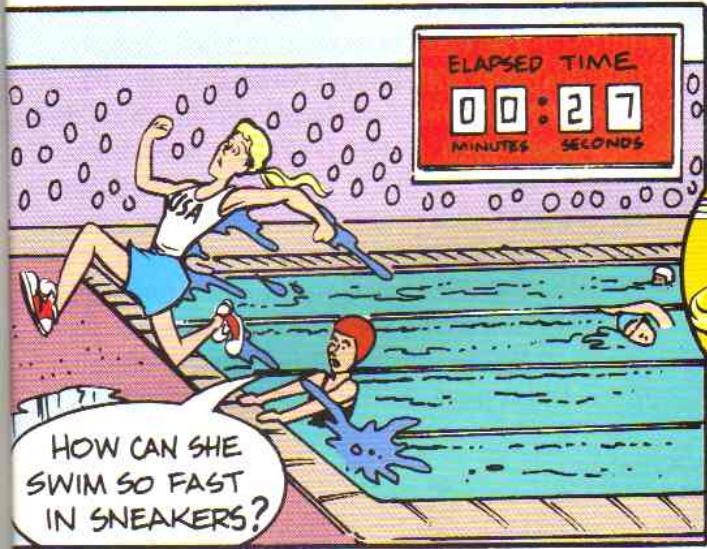
WOMAN  
OVER-  
BOARD!

HEY! THE FINISH LINE IS  
DOWN THE RIVER. GET BACK  
IN THE BOAT!  
YOU'VE ONLY  
ROWED FOR SIX  
MINUTES AND 28  
SECONDS!

TO TAKE A SHORTCUT, IDA SWIMS ACROSS  
THE POOL.

I HOPE MY TRACK SUIT  
IS WASH AND WEAR!

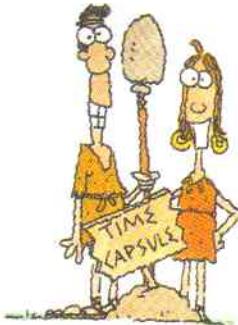




Did Ida make it to the start of the marathon? Add up the number of minutes and seconds it took Ida to pass through each event. Then add on 8 minutes and 44 seconds -- the total time it took her to get from one event to another and finally to the marathon. If she made it in 19 minutes or less, then she's off to a good start. For the answer, race to the Did It page.

# EXTRA!

By Beth Chayet



## LOST IN TIME

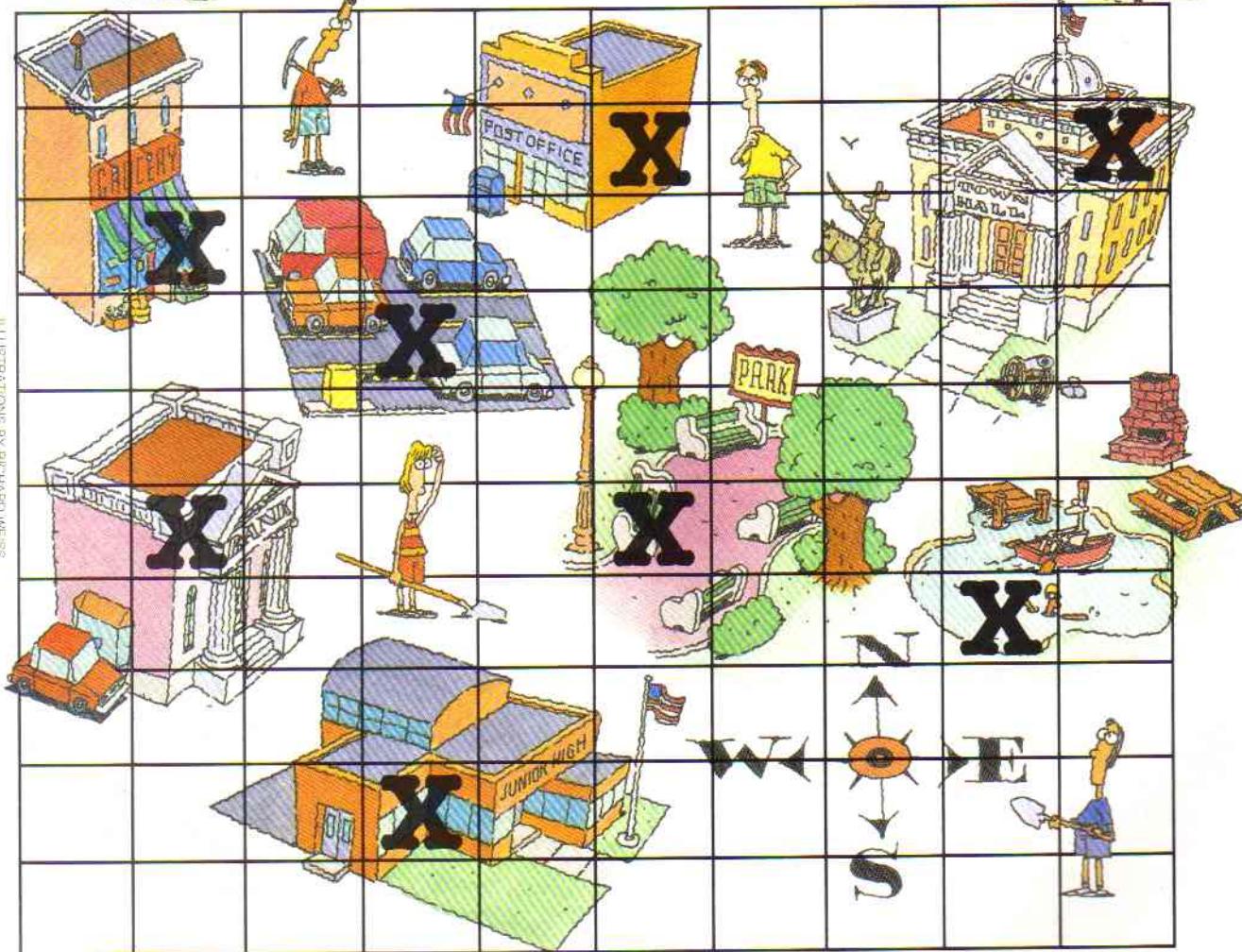
The class of 3008 B.C. filled a time capsule with their favorite stuff. They buried it at one of the locations shown on this town map. Now 5,000 years later, the class of 1992 A.D. wants to dig it up. But there's one problem: The kids don't know where the time capsule is buried.

Use the clues below to help them find the X that marks the buried capsule.

We've uncovered the answer on the Did It page.



1. The capsule is not located at the X that is closest to the Town Hall.
2. The capsule is not located at the X that has an odd number of vertical blocks between it and another X.
3. The capsule is buried west of the park.
4. The capsule is not south of the lake.
5. The capsule is buried at the X that has another X located two vertical blocks from it.
6. The capsule is not located at an X that has another X in the same row horizontally.



## GOING FOR THE GOLD

Here's one game you won't find in the Olympics. But be a sport and play it anyway. Place the sports words (at right) in the grid, so the letters fill all the boxes. Like a crossword puzzle, some words go through each other. The numbers tell you how many letters each word has. When you're finished, the letters in the shaded boxes will spell out the country where the Olympics are being held. We put in four words to get you going. So let the game begin!

Race to the Did It page for the answer.

**10**

Basketball  
Gymnastics

**7**

Cycling  
Hurdles

**9**

Water Polo  
Wrestling

**6**

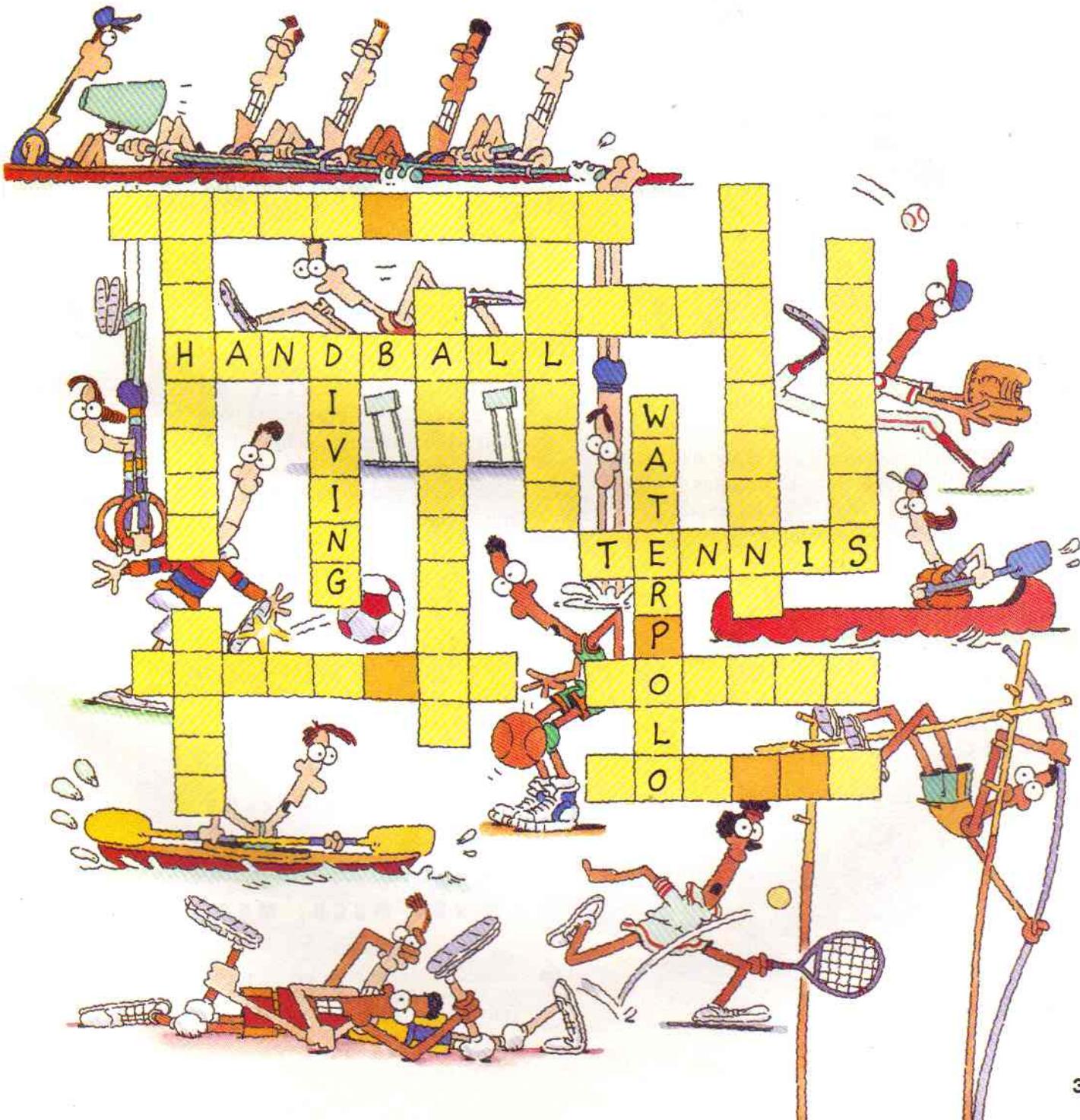
Diving  
Rowing  
Tennis  
Soccer

**8**

Baseball  
Handball  
Yachting

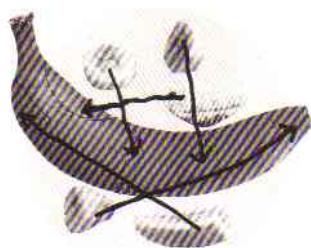
**5**

Canoe  
Kayak



# Did It?

**GO  
BANANAS!**



**ORANGE YOU  
DONE YET?**



Answer: 10

**AN APPLE A DAY**



**A RACE TO THE RACES**

It took Ida nine minutes and 16 seconds to go through all of the events. It took her another eight minutes and 44 seconds to get to the events. Those two times add up to 18 minutes. That puts her at the starting line at 8:59. Ida made it in time for the race by one minute.

**LOST IN TIME**

The capsule is buried in the grocery store.

**GOING FOR THE GOLD**



Answer: SPAIN

## WE GOOFED

- ✖ On the May 1992 Did It page, we gave the answer for a puzzle that doesn't appear in the issue ("The Oddest Coins").

## NEXT MONTH

- ★ Summer's almost over. But you have plenty to look forward to in our September 1992 issue of 3-2-1 CONTACT:

## DOUBLE TROUBLE

- ✖ There were dinosaurs. And then there were dinosaurs! One of the biggest, baddest monsters around was *Tyrannosaurus rex*. And now scientists have two nearly complete skeletons to prove it. Read the new news about one of the most terrifying beasts that ever walked the Earth.

## FUNNY BUSINESS

- ♥ Knock, knock. Who's there? Arthur. Arthur who? Arthur any more jokes? Yeah, plenty! This yuk-filled feature tells why laughter is the best medicine. You'll not only get a good chuckle, but you'll learn why jokes make you feel good, too.

## THE WRITE STUFF

- ☛ Before rocketships ever blasted off, science fiction writers were launching their own amazing spacecraft—in their stories. Take an out-of-this-world look at their sometimes wonderful, sometimes wacky dreams of space travel.

## PLUS

- ✓ **THE TIME TEAM**

## FACTOIDS

## AND MUCH, MUCH MORE!

- ♥ Corrections: January/February '92, Kilauea eruption (p. 8 and 9), © Franco Salmoiraghi/Photo Resource Hawaii. Yanomamo child (p.17), © Nair Benedicto/SIPA Press.

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